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# HIGHER EDUCATION

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*Modern Foreign Languages and NDEA, Title VI*
D. LEE HAMILTON

*The Union Director and His Job*
JAMES W. LYONS

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE—Office of Education

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# Modern Foreign Languages and NDEA, Title VI

By D. LEE HAMILTON*

BEFORE discussion of the programs carried on by the Office of Education under the authority of Title VI of the National Defense Education Act it is desirable to place in perspective the problems which this part of NDEA was designed to solve.

In this country there has been a broad relationship between our interest in foreign languages and our concern with international relations. There are two major periods of decision in the history of foreign language instruction in the United States: the first occurred at about the middle of the 18th century, when modern foreign languages were introduced into the curriculum; the second lies in our own day, and is approximately concurrent with World War II.

In these two periods attempts were made to redefine education in terms relevant to the social and political needs and aims of changing circumstances. In the first, the inclusion of modern languages in the curriculum resulted from a belief that contemporary civilization (West European) has as important an intellectual content as the civilizations of the ancients (Greek and Roman) had, and that the educated man must have access to modern thought no less than to ancient. This attitude clearly placed stress on reading, though there was no debate on reading versus speaking. In the second important period of curricular decision, triggered by World War II, there have been three important changes in language teaching: the basic aim in studying any modern language becomes now to speak and understand, though reading ability, it is assumed, is to follow; many more Americans must learn more languages, starting younger and continuing longer than before; and substantial numbers of Americans must gain active competence in a bewildering variety of languages, most of which had never before been taught in this country.

What is important to understand in order to have the proper perspective on foreign language developments under the NDEA is that the augmentation and radical change of emphasis involved in the second national decision are more difficult to bring about than even the introduction of modern languages was in the first national decision. And that would have been true even without problems of teacher certification, Carnegie units, advanced placement, and all the other paraphernalia (not to speak of the impedimenta) of our modern educational structure. And we must be sobered by the realization that on the whole the intentions of such of our forefathers as Ben Franklin were not achieved, for while modern languages were gradually introduced into the curriculum, we cannot claim that the average college graduate of the 19th century—still less the average high school graduate—was able to keep abreast of contemporary West European thinking. The stakes in our own day are higher. It is not only a question of improving the liberal education of college students, important as that is. In addition today the ability of the United States to *communicate* effectively in many tongues has become crucial on every plane not only to this country but to the entire free world.

Since early in this century Americans have been troubled by a basic paradox. Man's cultural process consists of two parts, not always distinguishable: the substance of what is transmitted (knowledge, science, aspects of behavior, etc.), and the vehicles by which it is transmitted (mainly language, but in addition institutions, formal and informal education, forms of visual and electronic communication, etc.). The substance of what is transmitted is now, with bewildering speed, making this physically one world through the scope and speed of communications; but at the same time it is giving to any of several groups the power to destroy this one world as we know it.

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*Director of the Language Development Program, Division of College and University Assistance, Office of Education, since June 1962. Dr. Hamilton came to the Office from the Foreign Service Institute of the State Department, where he had served as associate dean in the School of Languages since 1957. Before that he was academic dean of the Army Language School at Monterey, California. He has also taught at the University of Texas and Indiana University. During World War II he introduced and taught Portuguese at the U.S. Naval Academy.

Dr. Hamilton holds the B.A. from Baylor University, the M.A. from Northwestern University, and the Ph. D. from the University of Chicago.

But while the transmitted technological *substance* thus appears centripetal, the *forms* are centrifugal. For the languages, national and tribal institutions, patterns of behavior, and sets of values remain almost as diverse as they have been in the past: the basic cultural elements of the Far East, of Africa, of Latin American Indians remain nearly as "inscrutable" to us as each people found other cultures a thousand years ago. The epochal difference between now and a thousand years ago is that today everybody is infinitely more aware that other cultures do exist.

To sum up, the increased ease of communication multiplies enormously the frustrations of communication caused by cultural differences which were scarcely known to exist a relatively short time ago. *The technical facilitation of one world increases the awareness of many "worlds"*—and at the very time when technology has vastly increased man's destructive potential.

The American people have come to understand that the role of languages is crucial in our dealings with other peoples. We are beginning to recognize that, with shrinking distance and amplified communications, the question is not whether we want to communicate; the fact is that we are constantly communicating, and the only question is whether we can communicate what we wish in the way we wish. And we must heed the lesson of anthropology: silence is communication, too, and is usually interpreted as hostility.

It was against this background, and with many of these considerations more or less consciously in mind, that the Congress passed the National Defense Education Act in 1958.

Title VI of NDEA, administered by the Language Development Branch in the United States Office of Education, established four programs: Institutes for teachers of modern foreign languages in the elementary and secondary schools; fellowships for advanced students of critically needed foreign languages and related subjects; university language and area centers; research and surveys pertaining to modern foreign languages and their instruction. In addition in 1961 a special staff was added to the Language Development Branch, as recognition of the crucial importance of the Alliance for Progress, to give impetus to Latin American studies through these four programs.

Clearly the major congressional purpose was to increase the number of language teachers at all levels, to improve their quality, and to prepare them in "new" languages through graduate fellowships in foreign languages hitherto neglected in American education, through multiplied and strengthened language and area centers, and through special institutes for teachers of foreign languages in the secondary and elementary schools. And the research program was to provide needed teaching materials, to foster basic research in the principles and practice of language study, to quantify needs, resources, and progress.

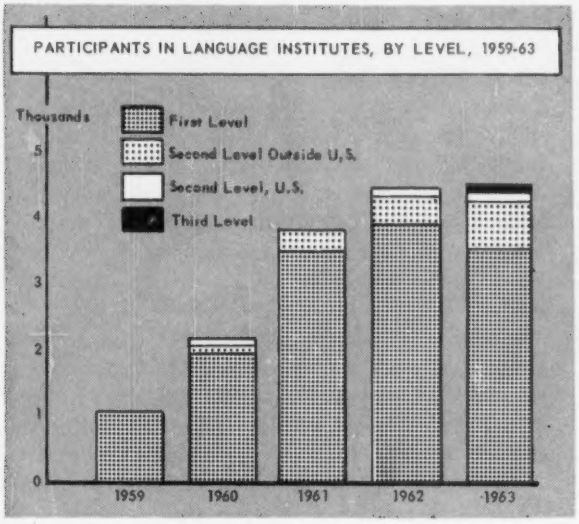
It would be easy to present masses of statistics on the four Title VI programs, but too many statistics are more likely to destroy perspective than to convey information. We have selected, however, the most significant statistics concerning the programs of the Language Development Branch.

### Language Institutes

Probably the most revealing figures related to language institutes are these: modern foreign language enrollments in public secondary schools totaled 1,872,946 in the fall of 1960, an increase of 44.5 percent over 1958. But we should also remind ourselves of how low a point we started from: only in 1960 did the percentage of secondary school students enrolled in modern foreign languages (21.7 percent) overtake the percentage so enrolled in 1934 (19.5 percent). The percentage of public high schools which did not offer a single modern foreign language declined from 56 percent in 1954–55 to 39.2 percent in 1960–61. The number of applications from teachers to attend language institutes has remained far larger than the number of vacancies (for 1962–63, 19,204 applications were received for 4,418 openings in institutes).

The figures represent substantial accomplishment, but still more remains to be done. While it is true that from 1958 through June 1963, 10,321 teachers have attended language institutes, it is also true that in the same period a still larger number of language teachers (perhaps up to 15,000) must be assumed to have left the profession, since 8 percent to 11 percent of public school teachers leave the field annually. So long as the present appropriation ceiling remains at $7,250,000 and the number of language teachers increases, we must look for whatever devices can be created to supplement the influence of the NDEA Language Institutes.

The most important feature of the legislative




phrasing on institutes was the clear injunction that they were to give training in the most up-to-date methodology designed to give an active, practical command of a language. And yet the wording is broad enough to permit, in Voltaire's phrase, more than one road to Heaven and certainly it harbors no animosity, explicit or implicit, toward the deepening and broadening of the high school student's perception of literary and wide humanistic values. NDEA does not provide for language institutes for college teachers. Indirectly, however, it offers the first broad hope that the colleges may soon receive numbers of students who will have reasonable command of one foreign language and who therefore (1) will not need to spend college time in acquiring this initial competence, (2) will be able to acquire a related language in college faster or better, and hence (3) will be able to study a language heretofore rarely taught in our colleges, and (4) will be able to spend more college time in the study of anthropology, literature, foreign relations, and other subjects which have an inherent relationship with foreign languages.

### Language and Area Centers

In providing for the establishment of centers for the teaching of "neglected" languages and related studies the act was basically intended to increase the Nation's reservoir of people who can communicate effectively in "neglected" foreign languages, those which have been little taught in the U.S. but which have assumed critical importance to the country as a result of changing world conditions. The inclusion of "related studies" does not bespeak a desire to foster the social sciences per se; it is rather an acknowledgment that a language does not exist independently or in a vacuum, that it is part of the total behavior pattern of a people and that, for whatever purpose the language is acquired, it becomes a more effective instrument of communication in proportion as the student learns the other categories of its speakers' behavior patterns.

But we must not allow the complexities of this discussion to obscure what is from any point of view one of the most important results of the NDEA: for the first time in the history of our higher education we now have a mechanism which systematically, with reasonably straight-line efficiency, is turning out M.A.'s and Ph. D.'s in the social sciences who have at least a basic practical command of such languages as Hindi-Urdu, Chinese, Swahili, etc. The consequences, as the trickle of such specialists slowly grows, are enormous.

The organization of the NDEA language and area centers is by no means uniform. At one extreme it is largely a paper term, and one has the feeling that nobody on campus is aware that for Washington purposes certain courses and professors are grouped together as a "language and area center." At the other extreme there are centers in which each faculty member is aware of what the others are doing, where there is a genuine sense of individual contribution

**Number of NDEA language and area centers, by language offered and by year, 1959–63**

| Area | 1959 | 1960 | 1961 | 1962 | 1963 |
|---|---|---|---|---|---|
| Total | 19 | 46 | 52 | 53 | 55 |
| East Asia | 5 | 11 | 11 | 11 | 11 |
| Southeast Asia | 1 | 3 | 3 | 3 | 3 |
| South Asia | 3 | 6 | 6 | 6 | 7 |
| Near and Middle East | 3 | 8 | 8 | 8 | 8 |
| Slavic | 3 | 9 | 10 | 10 | 10 |
| Slavic-East Asia | ..... | 2 | 2 | 2 | 2 |
| Uralic-Altaic | 1 | 1 | 1 | 2 | 2 |
| African | 1 | 4 | 4 | 4 | 5 |
| Latin American [1] | 2 | 2 | 7 | 7 | 7 |

[1] The Latin American Centers include support of Spanish and Portuguese. The funds available in 1959–60 and 1960–61 were for support of Portuguese only.

to a complex joint enterprise of both research and teaching.

But whatever the organization, the concept itself of such a center poses certain questions which have rarely if ever been discussed. One question may be put as an epistemological challenge: can the social sciences today "explain," "account for," categorize or even refer to the elements of behavior of a given ethnic group in such a way that the parts add up to what is directly observable as the whole? Presumably most social scientists would agree that the answer must be negative, though the explanations of why it is negative would vary. A second question is: can problems of sociology, economics, and political science be properly attacked without tying them to the behavior of a specific people? Related to this is a broad third question: through the concentration of presumably all the resources of the social sciences in an attempt to "explain" or "account for" the total behavior of a people, is there perhaps implied a new procedure which might lead to new developments in the theory itself of the social sciences? The next two or three decades may see a closer approach to the answers to such questions, and such an approach would itself be in part an unexpected dividend of NDEA.

The second major aspect of the NDEA language and area centers which merits special mention is their implications for undergraduates. To most of us in close contact with the NDEA centers the number of undergraduates already enrolled in courses which make up the curricula of centers has been something of a surprise. Thus in academic year 1961–62, 8,733 students were enrolled in 63 "neglected" languages at 52 NDEA language and area centers at 33 universities, and of this total over 5,500 were undergraduates. Most of these students, whether among the majority of seniors or the sprinkling of juniors, are starting to specialize while in the upper division of college and will, one assumes, continue into graduate work. The unexpected numbers of undergraduates in these courses have been especially gratifying because one of our hopes has been that the influence of NDEA would tend to lower the age at which Americans characteristically begin to study the languages involved. If it is difficult to obtain a Ph.D. in a social science, it is doubly difficult to earn the degree while at the same time building the competence to do research in an Asian language. So heavy an investment in the acquisition of tool skills becomes onerous and out of keeping at this advanced level and is wasteful of those years when a scholar's judgment has reached maturity.

But a truly liberal education which would equip any person, regardless of specialization, to live freely and fully remains the noblest aim of American higher education. Therefore we are particularly interested in the experimentation under way at many American colleges to devise ways of introducing into the undergraduate curriculum an integrated academic experience in a non-Western culture. And when the Association of American Colleges, a committee of which called such attempts "the ecumenical aspect" of American education, sought modest NDEA support for a survey and evaluation of these programs, with assurance that a privately printed report of the findings would be widely distributed, funds were quickly allocated.

### Modern Foreign Language Fellowships

The National Defense Modern Foreign Language Fellowship program excludes French, German, and Italian, in which strong graduate facilities have long been available and for which support is granted under the authority of Title IV. The main emphasis in the Title VI fellowships has been placed on a group of languages designated as "critical" by an independent study at the outset of the program—Arabic, Chinese, Hindi-Urdu, Japanese, Portuguese, and Russian. In 1961 Spanish was added to the list, with the proviso that preference be given to candidates who are not majors in literature. In both Portuguese and Spanish it is Latin America which is the center of attention, for in the frame of reference of NDEA the inevitability and permanence of geography are compelling.

The basic purpose of the NDEA fellowships program in modern foreign languages is to increase the number and shorten the training time of highly prepared scholars in those languages, together with their related studies, which have received little or no attention in this country. Given the negligible numbers of graduate students in these languages in 1957–58, it is understandable that a considerable interval is required to have a production line start depositing large numbers of NDEA-sponsored Ph. D.'s in the Nation's specialized labor market. We must remember that NDEA was passed in September 1958, that the first National Defense Modern Foreign Language Fellowships were

awarded in May 1959, and that consequently the first NDEA fellows did not start classes until June 1959. Of course most of those 162 fellows started classes in September 1959, not in the preceding June. Thus if a member of the first senior class after the enactment of NDEA applied for a fellowship in that year and got it, he can have had *at the most* only four years of graduate study as a fellow (1959–60 through 1962–63). (Normally a fellow is allowed only three renewals, or a maximum of four years in the program. This rule encourages individual effort and allows a larger share of the very limited funds for new applicants.)

It seems clear that it will be an exceptional student indeed who earns his doctorate in these fields in less than four years beyond the A.B. We have no reliable figures on the average time required to get a Ph. D. in this program, but it is reasonable to expect that it will be shortest where the language is an inherent part of the regular degree curriculum. It should be shortest, that is, for Ph. D.'s who major in the language or literature itself, or in linguistics, or in a combination of the three. And most time should be necessary in the social sciences, where study of a very difficult language, as required by the legislation which authorizes the fellowships, does not in itself advance the candidate toward the degree.

Here at least two real problems are posed for the far-sighted university administrator. To what extent should he allow the equating of degree programs which vary widely in their demands on time? And how far should be go in permitting graduate credit for essentially skill subjects like foreign languages? The answers are not in sight.

A partial solution to the second problem, of course, is to push language training itself as far down the academic ladder as possible, and more or less automatically NDEA has already exerted considerable pressure to do so. In Chinese and Arabic, for

**Number of NDEA fellows studying foreign languages, by term of study and by languages, 1959–60 to 1963–64**

| Term of study and language studied | Number of fellows | | | | |
|---|---|---|---|---|---|
| | 1959–60 (25 institutions) | 1960–61 (34 institutions) | 1961–62 (47 institutions) | 1962–63 (59 institutions) | 1963–64 (56 institutions) |
| **TERM** | | | | | |
| Academic year | 125 | 205 | 333 | 578 | 457 |
| Summer and academic year | 26 | 178 | 321 | 320 | 369 |
| Summer only | 11 | 73 | 101 | 108 | 66 |
| Other | | 2 | 8 | | 10 |
| Total | 162 | [1] 458 | [2] 763 | [3] 1,006 | [4] 902 |
| **LANGUAGE** | | | | | |
| Arabic | 22 | 58 | 95 | 108 | 100 |
| Chinese | 31 | 62 | 106 | 133 | 120 |
| Hindi-Urdu | 9 | 39 | 74 | 73 | 64 |
| Japanese | 23 | 63 | 100 | 103 | 80 |
| Portuguese | 11 | 34 | 55 | 77 | 60 |
| Russian | 66 | 129 | 190 | 175 | 135 |
| Spanish | ..... | ..... | ..... | 100 | 96 |
| Other | ..... | [5] 73 | [6] 143 | [7] 237 | [8] 247 |
| Total | 162 | 458 | 763 | 1,006 | 902 |

[1] Includes 106 renewals of Fellowships awarded in 1959.
[2] Includes 252 renewals of Fellowships awarded in 1959 or 1960.
[3] Includes 414 renewals of Fellowships awarded in 1959, 1960 or 1961; does not include 34 postdoctorals.
[4] The 1963–64 figures are tentative. Includes 506 renewals of Fellowships awarded in 1959, 1960, 1961, or 1962; does not include 96 undergraduates and 37 postdoctorals.
[5] In 25 languages.
[6] In 37 languages.
[7] In 48 languages.
[8] In 52 languages.

### NDEA centers and offerings in critical languages

The number of institutions conducting language and area centers and the number of critical languages offered under the NDEA program have increased since the program began as follows:

| *Year* | *Number of institutions* | *Number of critical languages* |
|---|---|---|
| 1959 | 13 | 48 |
| 1960 | 30 | 51 |
| 1961 | 33 | 63 |
| 1962 | 33 | 66 |
| 1963 | 34 | 67 |

example, the number of excellent fellowship candidates at the graduate level who have already had a full year or more of training in the language has become so large that, with the limited number of awards available, this prior study is now considered a prerequisite. We may also hope that the greatly increased study of modern foreign languages in high school and college (and especially in elementary school!) will tend to increase the numbers of students who study "unusual" languages and will lower the age at which they start.

So far, however, the number of secondary schools which offer languages heretofore regarded as uncommon remains on the whole somewhat disappointing. We may be pleased that approximately 75 high schools, most of them on the Pacific Coast and in the general environs of New York, are offering Mandarin Chinese, as contrasted with approximately 30 in 1961–62, and that between 500 and 600 high schools now offer Russian. But there is no similar movement in Hindi, Japanese, Arabic, or Portuguese. (It should be recorded, however, that in Hawaii a substantial number of students are now studying Japanese in high schools.) It has been proposed that every metropolitan school district with more than 4,000 or 5,000 students in grades 9 through 12 should start getting ready to offer one of these languages (or even a more "exotic" language) in the next 2 or 3 years. Teaching materials are or will become available, and where competent teachers cannot be found they are eager to be trained.

To revert now to what was said above about the survey by the Association of American Colleges of undergraduate non-Western or "world view" programs. The Office of Education will offer ten Title VI Modern Language Fellowships in the coming year to postdoctoral candidates who are now teaching in accredited 4-year colleges. They will have a summer of intensive study (approximately 20 hours a week) of one of the "neglected" languages, then will spend all the following academic year in continuing to study that language and at the same time will carry area courses. They are committed to return to their campuses and to participate in an undergraduate "non-Western" program. With this strengthening of such undergraduate programs we may hope with some realism to increase still further the number of undergraduates who get excited about the study of (formerly) remote areas of the globe and the noises people there make in communicating with one another. Furthermore, 96 grants for summer intensive language study have already been awarded to undergraduates who under the Title VI program will continue, not begin, their study of a "neglected" language in 1963–64.

### Research and Studies

Perhaps the most complex program under Title VI is the Language Research Program. The central tasks of the Research Program are to provide the batteries of teaching materials required to teach languages which have been neglected, and especially to foster pure and applied research in the psychology of learning language and in the multiple facets of the procedures by which languages are taught. But when it is essential to know in exactly what ways and with what success the colleges are stretching their students' minds with a non-Western culture, it is the Research Section which must finance and help devise the survey. When an authoritative analysis is needed of the impact of language institutes on university aims and practices in the training of language teachers, it is the task of the Research Section to negotiate with the most competent scholars on how the study can best be made. The Research Program is, in a sense, the specialized consciousness which integrates, monitors and informs the other programs.

To list the projects sponsored by the Research Section would have the effect of stultification by bookkeeping, but a sampling can give some notion

*(Continued on p. 35)*

# The Union Director and His Job

By JAMES W. LYONS*

DURING the period 1949 to 1962 there was a 300 percent growth rate in the number of college unions on American college and university campuses. This rate of growth has outdistanced the growth rate of higher education itself, and shows no indications of either declining or leveling off during the 1960's.

The position of union director has become common to an increasing number of colleges and universities. Until recently, relatively little was known about the work of the union director or about the closeness of his alliance with the educational profession as a whole. To learn more about them this study was conducted to identify the work, the background, and fields of preparation for and entry into the field of college union administration.

## Problems of Study

This study had four major purposes:

1. To describe and analyze the administrative responsibilities, vocational and education background, work environment, and professional aspirations of college union directors.

2. To determine the extent to which college union administration is a coherent and identifiable field of work by means of an examination of the similarities of background, professional aspirations, work environment, and administrative responsibilities of union directors.

3. To examine the degree to which directors, and those to whom they are administratively responsible, identify the director's work, background, and aspirations with the field of student personnel work.

4. To formulate a program of vocational and educational preparation for college union administration based on evidence collected in the study regarding the directors' educational and vocational background, the nature and frequency of their responsibilities, and the levels and kinds of educational and vocational background recommended by both directors and their employers.

* Dean of Students, Haverford College, Haverford, Pennsylvania.

## Major Descriptive Findings

*Work environment.*—With regard to the work environment of the union directors these parts were revealed:

1. The vast majority (67 percent) of the union directors were working in unions located on small college campuses (enrollments of less than 5,000 students). Nineteen percent were working on medium sized campuses (enrollments of 5,000 to 9,999 students); and only 14 percent were located on large campuses (enrollments of 10,000 or more).

2. Forty-seven percent, nearly half, of all the unions were less than 5 years old at the time the study was made, having been built since 1957. Only one-third of the unions had been built before 1952.

3. Although over half of all of the unions are located in tax-supported colleges and universities, the recent growth in the number of unions has occurred primarily on the small, privately supported campuses.

4. The title of director was used most frequently. Nearly half of the unions, however, used other titles. Some of the newer unions, especially on the smaller campuses, are being administered directly by the student personnel dean.

5. The number of full- and part-time employees within a union appeared to be determined by the size of the campus. The mean number of employees in the smallest campus unions was only 33.8, whereas the mean increased to 294.3 employees in the largest campus unions.

6. The number of employees reporting directly to the union directors did not appear to be related to the size of the campus or to the number of employees in a union. The mean span of control of all directors was 6.24.

7. Fifty-six percent of all directors reported to one college administrative official. The remaining 44 percent reported to two officials.

8. Of the directors reporting to one person, 49 percent report to the student personnel administra-

tor, 23 percent report to the president, 19 percent report to the business officer, and 9 percent to other officers. The employers of the directors reporting to two persons did not vary significantly except that the business officer was the most frequent second employer. Sixty-eight percent of all directors had some degree of administrative responsibility to the student personnel administrator.

9. The administrative officer was the most frequent source of the director's policy direction. Whereas 41 percent of the directors received their primary policy direction from the administrative officer, 22 percent looked to a governing board, and 37 percent looked equally to a governing board and an administrative official. Reliance upon both a governing board and an administrative officer was more frequent among directors on the small- and medium-sized campuses.

*Age, tenure, and vocational backgrounds.*—With regard to the age, tenure, and vocational backgrounds of directors the study found that:

1. The mean age of all directors was 39 years. The directors on the small campuses tended to be younger, as a group, than the directors on the medium- and large-sized campuses.

2. The mean tenure in their present position ranged from 3.5 years for directors on the smallest campuses to 8.7 years for directors on the largest campuses. The overall mean tenure was 5 years.

3. Directors reported an average of 2½ jobs prior to assuming their present position. The number of previous jobs did not vary according to the size of the campus on which the directors were located.

4. Only one-third of the directors reported any previous full- or part-time college union or related work.

5. Although more than half of all directors came to their position from some type of college work, there was no particularly prevalent field of entry. Similarly, there was no consistent pattern of the directors' total previous vocational experience.

6. Nearly all of the directors had earned a college degree. Forty-five percent had earned a master's degree and 7 percent had earned a doctorate. The level of academic preparation was generally higher among the younger directors and among the directors of unions located on the smaller campuses.

7. The most frequent undergraduate studies of directors on the small- and medium-sized campuses were in the social sciences, humanities, and business, in that order; on the larger campuses, the most frequent were in business.

8. Fifty-nine percent of all graduate studies were related to the field of education. Business, the second most frequent field of study, was reported by 19 percent of the directors with graduate work.

9. Approximately 50 percent of all directors were members of professional organizations other than the Association of College Unions (A.C.U.). The organizations to which directors belonged were primarily student personnel groups and groups with various college administrative concerns.

10. Twenty-six percent of the directors considered their present position a professional stepping stone, 30 percent were not sure, and 44 percent did not consider the position as a stepping stone. The younger directors and directors on the smaller campuses showed a greater tendency to consider the position a stepping stone than others.

11. The two predominant positions aspired to by the directors who considered their position a stepping stone were dean of students (39 percent) and director of a larger union (33 percent). Only 2 percent of the directors indicated vocational aspirations outside the field of higher education.

*Administrative responsibilities.*—With regard to the administrative responsibilities of the union directors the study found:

1. The areas of union administration and the percentage of directors with responsibilities for these areas were: student programs and activities, 92 percent; building services, 91 percent; maintenance and housekeeping, 81 percent; recreational facilities, 79 percent; construction and remodeling, 72 percent; food services, 56 percent; bookstore, 32 percent; and guest rooms, 19 percent.

2. Student programs and activities, food services, and building services were ranked highest, in that order, by the directors with those responsibilities as the areas that consumed the most of their administrative time and concern. When food services were among a director's administrative responsibilities, all areas except student programs and activities tended to receive less of the director's administrative time. On the large campuses the administrative time and attention to food services actually exceeded that given to student activities.

3. The distribution of the time the directors spent in union administration did not appear to be related to either the size of the campus or to the age of the

union. Directors of the larger and older unions generally had a greater range of responsibilities, but did not rank the administrative time given to any particular area differently from the ranking by the directors in the newer and smaller unions.

4. Sixty-nine percent of the directors reported non-union job responsibilities: 73 percent of the directors on the small campuses and 56 percent on the large campuses.

5. Fifty-three percent of the directors reported non-union responsibilities that were in areas of student personnel work; 27 percent, college business responsibilities; 8 percent, teaching responsibilities; and 12 percent a variety of other types of administrative responsibilities.

6. Forty-two percent of the administrative time of all directors with non-union responsibilities was devoted to these responsibilities. The amount of non-union administrative time expended was considerably less among directors on the large campuses (24 percent).

*Salaries, fringe benefits, and academic rank.*—With regard to the salaries, fringe benefits, and academic rank of directors, the study found that:

1. The medial salary of all directors was in the $8,000–$9,999 range; directors on the large campuses, in the $12,000–$13,999 range; directors on the small campuses, in the $6,000–$7,999 range.

2. There was no appreciable difference between the salaries of directors with a baccalaureate degree and directors with a master's degree. The few directors with a doctor's degree received slightly higher salaries than those without the doctorate.

3. The incidence of fringe benefits appeared to be related to campus size. Directors of unions on the medium and large campuses received more fringe benefits than their counterparts on the smaller campuses.

4. The mean number of weeks of paid vacation (3.8 weeks) of all directors did not vary when directors were grouped according to the size of their campus.

5. Twenty-eight percent of the directors reported having academic rank.

*Minimum amounts of work and academic preparation recommended by directors.*—With regard to the necessary minimum amounts of experience and academic preparation recommended by directors for their position, it was found that:

1. The model range of recommended minimum work in a college union or closely related work experience for all directors was 3 to 4 years; the minimum for the directorship in larger schools was 5 to 6 years.

2. Fifty-one percent of all directors indicated a baccalaureate degree, 48 percent a master's degree, and 1 percent a doctorate, as the minimum level required for their position.

3. The minimum level of education necessary for the director's position was slightly higher on the smaller campuses.

4. The two broad subject matter areas rated most important by directors as preparation for their work were management and student personnel work.

*Comparison between directors' and employers' responses.*—The employers in the employers' sample were asked some of the same questions as their directors. Their answers, tabulated and compared with the answers of their directors, indicated that:

1. There was a high level of agreement between employers and their directors on the director's source of policy direction.

2. Approximately the same number of employers as directors considered the director's position as a stepping stone to other work.

3. The employers and directors who considered the director's position as a stepping stone were in near agreement about the type of work into which the director's position would lead.

4. Approximately 10 percent of the directors in the employers' sample disclaimed administrative responsibilities for three areas that their employers believed them to be administering: student programs and activities, recreational facilities, and construction and remodeling.

5. Approximately 18 percent of the directors indicated administrative responsibilities for three areas in which their employers expected them to have no administrative responsibility: maintenance and housekeeping, food services, and bookstore.

6. Where employers and directors were in agreement on the administrative responsibilities of the director, they were also in agreement on how the employer expected the director to spend his administrative time and how the director actually distributed his time.

7. Employers and their directors were in close accord about the minimum years of college union or related work experience necessary for the director's position.

8. Employers indicated a slightly higher minimum level of academic preparation as necessary for the director's position than the directors themselves.

9. Employers and their directors generally agreed on the subject matter areas that were most important as preparation for the director's work.

## Conclusions

*College union administration.*—College union administration is not an easily identifiable or particularly coherent field of work except on the relatively few campuses with enrollments of over 10,000 students. Union directors hold few administrative responsibilities in common, share no consistent pattern of vocational and academic background, and spend slightly less than one-half of their time in vocational areas other than college union administration. Those currently in the field of union administration report and recommend neither long nor particularly specialized training. The directors' vocational aspirations suggest that their present work is more often than not a stepping stone to other college work.

Although there are unique general characteristics within the field of college union administration, such as the concurrence of student personnel work and business administration, it is not yet a field within which a director may move from one campus to another with assurance that his work will not vary considerably from that which he left.

*College union and student personnel work.*—The findings of this study are evidence that the majority of college union administrators and their employers identify the work of the director with student personnel work.

On nearly half of all campuses with college unions, the director is a member of the student personnel staff. A fairly large majority of all directors have some administrative identification with the personnel administrator.

Many of the directors and employers consider the director's position a stepping stone into student personnel administration. The professional affiliations of directors are largely with student personnel associations. The graduate studies of union directors are frequently in the areas of student personnel work, and guidance and counseling in higher education. Most of the non-union responsibilities of those in the field are in student personnel work.

*Preparation for college union administration.*—On the basis of the evidence in this study no single-disciplinary approach to academic preparation for college union administration can be formulated. Rather, a pattern of studies from several areas, an interdisciplinary approach, would seem more valuable and appropriate.

The combination of business management and student personnel work is particularly characteristic of the work reported by union directors. This pattern of administrative responsibility exists among nearly all directors regardless of the age of their union or the size of the campus on which they are located.

The skills of business management are necessary in the director's administration of a union. In nearly all cases he has a working staff larger than his immediate span of control. Many of his administrative responsibilities require business management techniques with appropriate control of costs and labor and regular economic assessment. Providing for food services, recreational facilities, and general building services is often a purely business and organizational function. The goal of the college union suggests that the business functions within the college union differ slightly from those of private trade and commerce. The maximum profit motive, although important, is relegated to an unaccustomed second place behind a more important service goal.

The service goal of the college union is defined by the educational objectives of the college. The union director has not only to ally his business functions with the educational goals of the college, but also to discharge extensive responsibilities for an educational program of student activities. The area of extra-curricular activities is unquestionably allied to student personnel work. A director, to be effective in extra-curricular activities, must utilize the skills of student personnel work in a manner that will maximize the educational values of his efforts.

It is difficult to draw a conclusion about the amounts and kinds of work experience necessary before assuming the position of union director. Directors neither had nor recommended consistent vocational areas of preparation. Less experience will be necessary to enter the field on a small campus than on the medium and large campuses. Three to four years of college union or related work experience is generally the minimum required on the small campuses whereas five to six years are required on the medium and larger campuses.

Related experience includes work in student activities, advising students in residence halls, business administration of residence halls, recreation, and general college subadministration.

### Recommendations

This study made no attempt to judge the effectiveness of the current pattern of college union administration. As has been previously mentioned, the conclusions derived from this study could conceivably perpetuate mediocre or even poor college union administration. The findings of this study do, however, support the recommendations for further studies to learn how well the union directors are carrying out their administrative tasks.

The conclusion that there was no single-disciplinary approach to academic preparation for college union administration was based upon the recommendations, responsibilities, and background of union directors presently in the field. Similarly based was the suggested interdisciplinary approach along the lines of student personnel work and business management. Further study is recommended to define the specific academic preparation that would have the greatest utility and value to persons considering union administration as a vocation. Further study should utilize such resource persons as curriculum builders, businessmen, college administrators, directors of long tenure, and student personnel administrators. Further study is also recommended on the role of the college union and its relations to the goals of higher education in general.

It is recommended that special consideration be given to the establishment of a course in college union administration. Although the general areas of student personnel work and business management can be studied independently, it may be necessary to provide a special course to present them as a unified concept of college union work. As the number of college unions continues to increase, an increasing body of knowledge about the best utilization of educational and business administrative techniques will become available. The methods whereby the skills of student personnel and business administration are brought to bear on the administration of the unique union facility are methods deserving of special attention and it is recommended that study be directed toward this end.

On the basis of the administrative tasks and suggestions of the corporate body of directors, it is recommended that consideration be given to the inclusion of courses in business management, personnel management, student personnel work, group dynamics and group work, college administration, and recreation as parts of a program with an interdisciplinary approach.

It is recommended that further study be made of the relationship between the theories and practices of recreation, as a field of work, and the theories and practices of student personnel work; and how these theories and practices may be brought to bear on the area of college union administration. The educational and vocational background of a sizeable minority of directors is closely allied with recreation, a relatively young but rapidly growing field of work. This may have resulted in the application of the theories and practices of recreation to the campus community. In the eyes of some the college union is, in effect, a community center modified to the needs and goals of a slightly different kind of community; a homogeneous community of students and faculty. The college union may well provide the impetus for more systematic and purposeful modification of the techniques and theories of recreation into a specialty known as campus recreation. The close alliance between college union administration and student personnel work could bring the theories of recreation to bear on the field of student personnel work and vice versa.

This study was designed, in part, to learn what areas of union administration college union directors were responsible for. It is recommended that further studies now pursue their methods of administration. Of equal importance is the need to learn of the ends to which directors are working. What, for example, are the goals that directors are striving to achieve through their student activities programs, food services, recreational facilities, and building services?

7. This study found a much greater identification between union directors and the field of student personnel work than any previous study. It is recommended that further studies conducted in the field of college union administration examine the possibility of a trend toward continued identification with student personnel work.

8. It is recommendeded that the work, preparation, tenure, and aspirations of other levels of college union administration now be given consideration and study. Such consideration would provide a

fuller understanding of the entire area of college union administration.

One of the unexplained findings of this study was the disagreement between directors and their employers on the nature of the directors' administrative responsibilities. Such disagreement, even though expressed by only 10 to 15 percent of the directors, is certainly unhealthy. Further study of the causes of these misunderstandings is recommended. It is also recommended that the Association of College Unions make an effort to encourage directors to examine their various responsibilities and to ascertain that they are, in effect, in complete agreement about the nature of their work with their employers.

The close relationship between college union and student personnel work suggests implications for the entire field of student personnel work. Within the next decade it is very likely that an even larger number of student personnel administrators will have some degree of administrative responsibility for a college union. It is recommended that the authors, curriculum builders, teachers, conference planners, and journalists in the field of student personnel work give appropriate consideration to the goals, problems, and practices of college union administration.

**Procedure used in college union survey**

A questionnaire was used to collect the data for study. Two pilot studies were conducted prior to the main study; the first pilot study with the 18 members of the Association of College Unions Research Committee, and the second with a selected sample of 21 members of the A.C.U.

The final questionnaire, accompanied by a cover letter written by the President of the A.C.U., was sent to the 446 members of the A.C.U. located in the United States. Two follow-up mailings to nonrespondents were conducted at the end of 10 and 20 days respectively; the first a post card and the second a letter.

Because the study was concerned only with the campuses with union buildings, several of the A.C.U. members were eventually eliminated from the original sample because they reported no building. Two hundred and forty-seven responses were finally used, a useable response of 78.9 percent of the schools with union buildings.

An abbreviated and slightly modified version of the directors' questionnaire was sent to 100 randomly selected employers. Eighty-five of the 100 employers returned questionnaires, an 85 percent response.

# The College Union: The Campus Center

By PHILIP A. TRIPP*

COLLEGIATE INSTITUTIONS range in their physical aspects from single monoliths on small tracts to vast arrays of buildings, sometimes distributed on widely separated campuses. Those who populate them are individuals having interests and purposes of many kinds and varieties—faculty, students, supporting staff, and inevitably a dog or two. They all, however, feel a kindred need for identification with their schools. Hence, every campus community feels the need for a center or a hearthstone. Many institutions have provided one in the form of the college union. Some notes on the historical and philosophical background and the present state of development of these interesting places may, therefore, be worthy of the attention of the higher education community.

Perhaps the most striking shift of emphasis in the long history of higher education has occurred in the last half century. From an almost exclusive commitment to John Cardinal Newman's view that the primary object of liberal education is simply the cultivation of the intellect as such, many institutions now take the position that they are responsible in important ways for the total personality development of their students. John Dewey has been in-

* Specialist for student services, Division of Higher Education, Office of Education.

fluential in this reformulation of ideas by his emphasis on the social evolutionary consequences of education. Although he insisted that education should be concerned with the transmission of the cultural and intellectual heritages, he further insisted that it has a social end: the continuous improvement of society. This is accomplished, in his view, through the individual's growth and development carefully nurtured by skilled teachers who provide opportunites for educationally consequential experience both formally and informally. Contemporary social scientists seem to share these views, and much emphasis has beer given in recent studies of students and college communities to these considerations. The currently developing profession of student personnel work in colleges and universities has been and is a concomitant of these ideas.

One aspect of student personnel work, which in many important ways synthesizes the main thrusts of this work, is characterized by the college union. The union is not, however, altogether new. The earliest college union was founded at Cambridge University, England, in 1815. It was literally a "union" of three debating societies. The first union building on a college campus in the United States was Houston Hall at the University of Pennsylvania, which was opened for operation in 1896. Its function was to provide "a place where all may meet on common ground."

Many unions sprang up on American college campuses after World Wars I and II. They were erected as living war memorials, a notion which seems to have had greater appeal to many donors than the construction of traditional monuments. At present there are more than 600 college unions in the United States, and many more are in the planning stage as new college campuses are developed. Frequently the college union ranks immediately after classroom and laboratory facilities in priority of construction.

From its early days the union has been the provider of social amenities on the American college campus. Those who man this enterprise like to call it the living room of the campus. In addition, it has served as a service agency by providing food service, books and supplies, and recreational facilities. Its most important contribution to education has been the support it has lent the formal educational programs of colleges and universities through its informal programs and special facilities.

Nowadays, the college union is increasingly living up to its name. It is, in many institutions, providing a basis not only for social unicn, but also for an effective mobilization of the collegiate communities' intellectual and artistic capital. Although dining facilities and bookstores are important, the provision of informal meeting rooms, art galleries, music rooms, libraries, and theaters is a major concern in the planning and operation of these buildings.

Typical programs encompass not only traditional recreational activities, but such informal educational programs as lecture series by distinguished visitors, professional and amateur musical performances, and foreign film programs. Facilities for painting and sculpting, photographic laboratories and hobby shops are frequently part of the union offering.

A recent development of great significance has been that of the special provision for and use of these centers for conferences and colloquia, not only for students and faculty members, but also for community organizations having cognate educational purposes. This identification with these larger constituencies is reflected in the names of some buildings: The University Center, Campus Activities Center, and the like. Clearly here these facilities serve educational purposes in the best sense and serve to vitiate the "ivory tower" stereotype which argues that colleges are out of touch with the world around them. Businessmen, physicians, lawyers, and housewives may be seen in the halls of the union, frequently in the company of students or faculty members.

Thus it may be observed that these elements of the campus scene have purposes far removed from the primitive notion that they are largely mere entertainment and supply depots.

From his early day functions as a campus logistics expert, the modern union executive has been transformed into a new kind of educator: one who is concerned with what is frequently called co-curricular education. His efforts and those of his staff are usually mainly directed toward a development of co-curricular programs calculated to serve that basic objective of many colleges and universities: the achievement of the full potential of the talents and capacities of the individual students. The programs the union offers are carefully designed to induce students to explore their ideas and capacities to act in relation to them. Organization, events, and staffing are well calculated to these ends.

In many cases, the plan of organization within the

# Federal Loans For College Unions

By LESLIE F. ROBBINS*

In 1955 amendments to the College Housing Loan program administered by the Housing and Home Finance Agency authorized loans for dining facilities, college unions, and infirmaries. The colleges have made frequent use of this Federal program to finance college unions and other projects which include union-like facilities. In many cases the project cannot be specifically identified as a union building, but it may have been planned for use as a union.

By December 1961, the Housing and Home Finance Agency had made loans to construct 32 college unions, 105 dining facilities with unions, 14 dormitories with unions, and 61 dormitory dining facilities with unions. Later figures for the College Housing Loan program are not yet available.

The *Enrollment and Facilities Survey 1961–65* of the U.S. Office of Education identified 349 new college unions and major union expansion projects which the Nation's colleges (90 percent by enrollment) reported they were planning to complete within that 5-year period, at an estimated cost of $314 million. Although many projects of this type are financed with gifts and donations and occasionally by means of tax money, the survey revealed that revenue bonds were expected to supply the construction funds for a large proportion of the projects. In publicly and privately controlled institutions combined, the survey indicated that the anticipated financing of this functional group of buildings (auxiliary other than residential) was to be by revenue bonds to the extent of 40 percent and that the colleges expected to sell 80 percent of all such bonds to the Housing and Home Finance Agency.

In the annual reports of building construction completed by respondents to the *Higher Education Planning and Management Data* for the 2 years 1959–60 and 1960–61, 126 college union projects were identified at a total cost of $104 million. For that part which was financed through the use of revenue bonds, the private institutions relied almost completely upon the College Housing Loan program of the Housing and Home Finance Agency for construction funds.

Thus the College Housing Loan program has helped provide the type of facilities which are made possible by college unions and the response from the colleges indicates that a need has been filled. The soundness of the colleges' credit has in no way been impaired by the program since after 8 years of operation the program still has a record of no defaults.

*Specialist for business administration, Division of Higher Education, Office of Education.

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union provides students with opportunities to take responsible roles in the affairs of the union in all of its aspects. A standard pattern involves 12 to 15 committees of students, chaired by an elected student executive, which administers budgets often running to many thousands of dollars. In some cases, literally hundreds of students may be involved.

Individual students frequently assume personal responsibility for the management of major campus events. Contract negotiations, physical arrangements, financial operations as well as promotion and sales may be assigned to them. Events such as a Great Current Issues Forum, or a foreign film series, are also often planned and promoted by young men and women who volunteer to serve. Their sense of involvement and identification with their schools is thereby substantially intensified. These opportunities for active experimentation, and for active participation and service as a campus citizen give form to the old adage of learning by doing.

Perhaps the thinking of those associated with the direction of college unions may be characterized by one of their senior leaders, Earl E. Harper, director of the School of Fine Arts and of the Iowa Memorial Union, in remarks made at a regional meeting of the Association of College Unions in Raleigh, North Carolina, on October 16, 1959. Dr. Harper enunciated a union credo in which he noted that there are seven basic human values and that they pertain to the economic, physical, recreational, social, intellec-

tual, esthetic, and spiritual aspects of life. He observed that an educated man or woman may be more interested in one field of value than another, but in his striving for cultural breadth and stature he will aspire to develop some understanding of and response to each and all of the seven. Emphasis upon these values must, he asserted, become the keynote of any enduring program in any college or university union and should be a leavening influence upon all those involved in any way in union life and work.

The Association of College Unions, an organization which celebrates its fiftieth anniversary this year, so wholeheartedly subscribes to Dr. Harper's views and sentiments that it has made available in pamphlet form his entire remarks on that occasion. The members, although they represent diverse backgrounds and institutions, unanimously concur in their acceptance of their obligation to serve and promote these ends.

Although the growth of these programs and buildings responds to recently formulated conceptions of the nature of the individual and the role of the institution in his development, their thoughtful leaders do not contend that in them the Golden Age of higher education has arrived. Depending on individual circumstances, union programs are more or less successful. They require unusually skillful and devoted leadership and talent for their realization. At their best, they are marvels to behold, for they bring to life some of the aims and purposes of their institutions in impressive ways. As a national phenomenon, the promise has yet to be fully realized.

The Federal Government has attested its interest and support of the union idea through the granting of loan funds for purposes of construction or expansion of these facilities. In the article on page 16 the extent of the Federal investment through the College Housing Loan Program is discussed, and projected plans for such facilities are also reported.

The college union has achieved a new status and is increasingly involved in the main business of the campus: educating students.

# Curriculum Patterns in Higher Education: The Biological Sciences

By THOMAS E. FURMAN*

To DISCOVER the patterns of requirements in the curriculum leading to a bachelor's degree in colleges and universities across the Nation, the Office of Education is completing a survey titled "Curriculum Patterns in Higher Education." The general survey covers the biological sciences, including botany, general biology, and zoology; the humanities, including English, Spanish, and speech-drama; mathematics; the physical sciences, including chemistry and physics; the social sciences, including history, political science, and sociology; engineering; and agricultural sciences, each of the last two including several specialties within the chosen field.

This report analyzes preliminary findings for curriculums leading to the baccalaureate degree in the biological sciences (botany, general biology, zoology).

The survey dealt with the baccalaureate programs in 506 schools, chosen from a nationwide listing [1] with a view toward sampling from a variety of institutions, large and small, private and public, in many parts of the United States. In analyzing the data, however, individual schools were not grouped by name, region, or type of control, but only on the basis of the attributes being measured—their course offerings in biological curriculums.

There is great variation among curriculums and credit units in American higher education—as to the *type* of unit, such as semester-hour, trimester hour, quarter hour, or course unit. The *number* of such units in a curriculum also varies widely, as

*Specialist for curriculum patterns in biological sciences, Division of Higher Education, Office of Education.

[1] *Earned Degrees Conferred, 1959–60* (OE–54013–60), U.S. Office of Education, Washington, D.C.

Table 1.—Number of institutions reporting given total numbers of credits, in the biological sciences curriculums

| Curriculum | Semester hours | | | | | | | Tri-mester hours | Quarter hours | | | Course units | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Under 120 | 120 | 121–3 | 124 | 125–7 | 128 | Over 128 | 124–28 | 180–91 | 192 | Over 192 | 18–48 courses | |
| Botany | 1 | 13 | 1 | 9 | 7 | 7 | 9 | 1 | 5 | 5 | 3 | 7 | 68 |
| General biology | 1 | 19 | 5 | 48 | 23 | 37 | 43 | 1 | 7 | 5 | 3 | 14 | 206 |
| Zoology | 3 | 17 | 0 | 18 | 5 | 15 | 13 | 1 | 7 | 7 | 6 | 7 | 97 |
| Total | 3 | 49 | 6 | 75 | 35 | 59 | 65 | 3 | 19 | 17 | 12 | 28 | 371 |

shown in table 1. Because of this great variety, it was decided that the only practicable basis for comparing these many different programs was that of *the percentage of the total curriculum credits in a given field.* For example, if an entry for some particular field of study was listed as 30 credits, in a curriculum of 120 credits, then this was noted as 25 percent of the curriculum. Similarly, an entry of 18 credits in a curriculum of 136 credits was noted as 13.2 percent of the curriculum.

This basis of interpretation may be considered as one way of expressing the extent to which a student's work load or study effort is applied in any one field of learning. Admittedly, such a measure ignores the *qualitative* differences in effort of any one person, between a given course in one subject and a course in another, with the same stated number of credits, which, to him, is more difficult or more demanding of study and thus more time consuming. It is assumed for the purpose of this survey, admittedly with the exclusion of numerous complexities of the learning process, that a given percentage of his total credit load in one field of study, in any institution, rates the same value in the student's program as does the same percentage in any other field or institution.

Credit units having been converted to percentage units for the purpose of comparing all the curriculums reported, the resulting data were analyzed as follows:

Within the area of the biological sciences, curriculums were classified into the six groups, shown in table 2 with the number of curriculums reported in each group.

Table 2.—Degree and number of curriculums reported in biological sciences

| Subject field | Degree | | |
|---|---|---|---|
| | B.S. | B.A. | Total |
| Botany | 43 | 45 | 88 |
| General biology | 120 | 141 | 261 |
| Zoology | 60 | 67 | 127 |
| Total | 223 | 253 | 476 |

The apparent excess of the main total for table 2 over that for table 1 results from the presentation of *both* B.S. and B.A. curriculums on each of 102 questionnaires, which curriculums were analyzed separately; and in a few cases where more than one curriculum for the same degree was reported from an institution.

Data were analyzed on IBM cards for the mean percentage allocation within each field and as well as for other attributes which will be reported and discussed more fully in a later publication. For the present the mean or "average" values will give an indication of general trends among the several curriculums. They are shown in table 3.

When these curriculums are all grouped in such a manner, the most striking feature of the grouping is

Table 3.—Mean percentage allocation of credits among subject fields in 466 biological sciences baccalaureate curriculums

| Subject field | DEGREE | | | | | |
|---|---|---|---|---|---|---|
| | B.S. in botany | B.A. in botany | B.S. in gen'l bio. | B.A. in gen'l bio. | B.S. in zoology | B.A. in zoology |
| Biological sciences | 26.1 | 26.2 | 24.7 | 25.5 | 27.1 | 25.8 |
| Mathematics and statistics | 4.4 | 2.6 | 4.4 | 3.4 | 4.8 | 4.1 |
| Humanities | 20.1 | 21.2 | 24.7 | 26.4 | 19.9 | 22.1 |
| Social sciences | 8.9 | 9.0 | 8.5 | 8.5 | 8.9 | 9.1 |
| Other courses req. | 4.1 | 3.3 | 3.6 | 3.2 | 3.8 | 2.7 |
| Physical sciences | 11.9 | 8.9 | 13.6 | 11.9 | 14.6 | 11.2 |
| Electives | 25.0 | 28.5 | 20.5 | 21.1 | 21.2 | 25.0 |

its uniformity. With very little variation, the major field of study receives one fourth of the total number of credits. At the other end of the scale, electives make up about another fourth of the total, with somewhat more variation. The other fields also contribute to the uniformity of the pattern.

Within a given curriculum, be it botany, general biology, or zoology, the difference in course credits between the bachelor of science and the bachelor of arts degrees is not great. Figure 1 is a diagram of the mean values for the botany curriculums, comparing the two degrees. It can be seen that, in general, the two curriculums are very similar: the apparent differences lie in a larger sector of mathematics and statistics in the B.S. curriculum, with a correspondingly smaller sector in the humanities as compared with the B.A. program, and a higher proportion of physical sciences to electives in the B.S. program, as compared with the B.A. curriculum.

If the curriculums in general biology and in zoology are expressed in comparable diagrams (Figs. 2 and 3), it appears that the salient difference among them shows in the "humanities" sector, which includes such subjects as English, fine and applied arts, foreign languages and literature, philosophy, and religion: the humanities bulk larger in general biology programs than in either of the more specialized botany or zoology curriculums. This is compensated by a decrease in electives credits. Again, similarity rather than difference, is the striking feature.

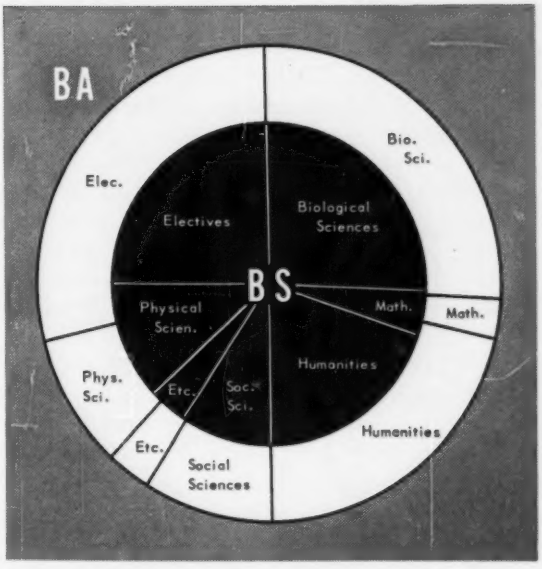


**Figure 1.—Mean percentage allocations of credits for bachelor's degrees in botany. *Inside:* Bachelor of science curriculums; *outside:* Bachelor of science curriculums**

The distinction between these curriculums seems to lie principally in the emphasis given to particular courses within the major area. Shown in table 4 is a listing of percentage allocations of credits among four types of courses.

Differences between the listings "other, specific" and "unspecified" might be compared to required and elective courses in a general curriculum: the "other, specific" category would include courses such as human physiology or microbiology which do not exactly fit the headings, in the view of the respondent;

Table 4.—Mean percentage allocation of credits among course subjects in the biological sciences major area

| Subject field | Percentage allocation of credits to | | | | | |
|---|---|---|---|---|---|---|
| | B.S. botany | B.A. botany | B.S. general biology | B.A. general biology | B.S. zoology | B.A. zoology |
| Botany | **18.3** | **17.9** | 2.6 | 2.9 | 2.2 | 2.0 |
| General biology | 1.8 | 1.8 | 3.8 | 3.9 | 1.6 | 2.1 |
| Zoology | 2.6 | 3.1 | 5.2 | 4.8 | **16.9** | **17.0** |
| Other, specific | 1.8 | 1.3 | 4.7 | 5.9 | 2.5 | 1.8 |
| Unspecified | 1.6 | 2.0 | **8.5** | **8.2** | 3.7 | 2.9 |

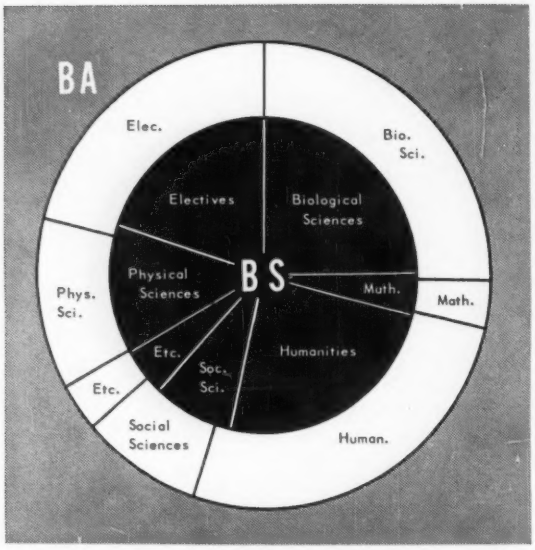


**Figure 2.—Mean percentage allocations of credits for bachelor's degrees in general biology. *Inside:* Bachelor of sciences curriculums; *outside:* Bachelor of arts curriculums**

while the "unspecified" group refers to a number of courses which may be elected within the major field. The percentage figures given are percentages of the total credits for the whole curriculum. Thus, they represent, in the case of the major as shown in bold face numerals, the specific concentration in the major subject, within the entire course of study. In this case, there are marked differences among the three pairs of curriculums, which corresponds to their titles: botany course credits are greater in the botany curriculum; zoology, in the zoology curriculum. The general biology curriculum shows a generalized distribution—in which, moreover, the largest group of credits is the "unspecified" listing. This appears to be the only marked distinction between these several curriculums.

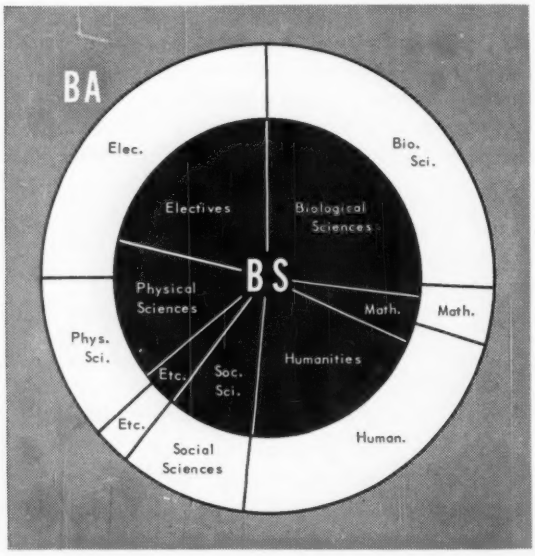


**Figure 3.—Mean percentage allocations of credits for bachelor's degrees in zoology. *Inside:* Bachelor of sciences curriculums; *outside:* Bachelor of arts curriculums**

## Summary and Discussion

As part of a more general survey, questionnaires asked American colleges and universities to report the credits they awarded in defined fields of study for six baccalaureate curriculums in the biological sciences. The answers were interpreted on the basis of the percentage allocation of credits to a given field, among the total credits for the degree of bachelor of science or bachelor of arts in botany, general biology, or zoology.

Results of 466 curriculums show that consistently, with only small variations, the major field receives one fourth of the credit percentage distribution; the remaining courses, three-fourths. The ratio of required to elective courses is somewhat more variable, but in general, required courses make up about $\frac{7}{10}$ to $\frac{8}{10}$ of the total credits, and elective courses, the remaining $\frac{3}{10}$ to $\frac{2}{10}$.

As may be expected, the curriculum for a given major, as named, emphasizes that particular major: for example, for a B.S. in botany the mean percentage of botany credits is 18.3, and the mean percentage of zoology credits is only 2.6. By contrast, for a B.S., in zoology the mean percent of zoology credits is 16.9, and the mean percentage of botany credits is only 2.2. The general biology curriculums are, indeed, more generalized in their biology patterns, the largest category being the "unspecified" group.

The principal distinctions between bachelor of sciences and bachelor of arts curriculums appear to fall in the relation between mathematics and statistics, and the physical sciences, on the one hand, and credits in the humanities and free electives, on the other. In general, the curriculum for a science degree stresses mathematics and sciences somewhat more in relation to the corresponding arts degree, which stresses the humanities, and permits more

electives. Apart from the numerical data, which do not show very striking differences between the two degrees, many of the responding institutions remarked on their questionnaires that the requirements for the B.S. and B.A. degrees in a given major are identical, and that the title on a diploma is the graduate's choice. In other cases, institutions noted that credits in the physical sciences, beyond those required, were "recommended" for B.S. candidates. In this sense, current practice may be reflecting a trend toward more training in chemistry and physics for majors in the biological sciences, a trend which has not yet materialized as formal, catalog statements of increased requirements in this field.

In view of this variation in individual judgments, the consistency among the patterns of course-credit assignments in these fields in 361 American colleges and universities, now training the Nation's future researchers, technologists, and teachers, is remarkably high. Also remarkably uniform is the pattern of the whole curriculums for six degrees in three major fields. For a community in which so many schools take pride in being "different" in one or another way, the great commonality of curriculums is a matter of general interest.

OFFICE OF EDUCATION *Studies* AND *Surveys*

## Mobility of Student Borrowers

ADDITIONAL analysis and data have been obtained from the survey on student borrowers, reported in the October–November 1962 issue of *Higher Education* (pp. 12–14). The report on the survey, entitled *Student Borrowers: Their Needs and Resources* (OE–55011) by Robert C. Hall and Stanton C. Craigie, is available from the Superintendent of Documents, Government Printing Office, Washington 25, D.C. for 55 cents.

The following are additional highlights from the report, based on the academic year 1960–61:

In the Nation 52 percent of the borrowers from National Defense Student Loan Funds are in publicly controlled institutions and 48 percent in privately controlled institutions.

States with the highest percentages of their borrowers in public institutions, according to a 1960 survey, are Delaware, Nevada, and Wyoming, 100 percent; Alaska, 96; New Mexico, 94; Utah, 93; Hawaii, 91; Arizona, 86; Oklahoma, 83; Arkansas, 77; Mississippi, 75; Michigan, 74; and Alabama, 69.

States with the lowest percentages of their borrowers in public institutions are the District of Columbia, 2 percent; Massachusetts, 17; Pennsylvania, 23; South Carolina, 29; New York, 31; Rhode Island, 32; Iowa, 34; Illinois, 36; Tennessee, 39; and Indiana, 43.

In the Nation as a whole 23 percent of the borrowers from the National Defense Student Loan Funds are attending institutions of higher education outside their home States.

States with the lowest percentage of their borrowers attending institutions in their own home States are District of Columbia, 13 percent; New Hampshire, 46; Rhode Island, 48; Delaware, 51; and Indiana, 55.

States with the highest percentages of their borrowers attending institutions in their own home States are Puerto Rico, 100 percent; Michigan, 89; Mississippi, 89; Montana, 88; Oklahoma, 87; and Texas, 87. At least 68 percent of the borrowers in 44 States are studying in their home State.

Some States contribute a larger number of borrowers to the total number in the Nation than the number who borrow at institutions within their borders. Thus New York is the home State of 13,753 of the 148,348 borrowers in the Nation, but only 12,480 students borrow in the State of New York.

The percentage of borrowers who come from home States within the region where they attend college is as follows for each region: East 95, Central 89, South 91, West 90.

The percentage of borrowers in each region attending institutions in their home States is as follows: East 76, Central 73, South 79, West 81.

The East region receives 2 percent of its borrowers from the Central region, 2 from the South, and 1 from the West. The Central region receives 5 percent of its borrowers from the East, 2 from the South, and 4 from the West. The percentages in the South from other regions are: East 5, Central 3, and West 2. The percentages in the West from other regions are: East 2, Central 5, and South 2.

The percentage of borrowers attending college

outside their home region is largest, 12 percent, for the East region, and smallest, 7 percent, for the South region. Of the Central and West region borrowers 8 percent attend colleges in other regions.

In the East region the States which received the largest numbers of groups constituting 1 percent or more of their borrowers from States outside the region are the following: the District of Columbia with 11 groups from outside and New Hampshire with 7 groups; both drew such groups from California, Florida, Illinois, and Ohio.

To the District of Columbia Virginia contributes 8 percent of the District borrowers, the only immigrating group over 4 percent in the region.

New York and Pennsylvania together supplied 64 percent of the group from the East region who borrowed in the Central region.

The West has the largest percentage of borrowers who are graduate students.

In institutions for teacher education 33 percent of the borrowers are from home States in the Central region and 15 percent from home States in the West.

Borrowers in privately controlled institutions got 2 percent more than their proportionate share of loans.

Average sizes of loans in public institutions are $424 and in private $461—i.e., 9 percent higher.

The average size of loans to borrowers attending institutions in their *home States* is $433 and to borrowers attending instututions *outside* their home States $472—or 9 percent more.

Borrowers at universities get 5 percent more than their proportionate share of all loans, those at liberal arts colleges 1 percent less, and those at teachers colleges 3 percent less.

## Projections of College Faculty, 1950–70

An Office of Education circular, being prepared by Kenneth A. Simon, Chief of the References, Estimates, and Projections Section in the Division of Educational Statistics, offers information on projections of the number of faculty and other professional staff for resident degree-credit instruction in all courses and in science courses. The projections are based on 1950–60 Office of Education data on all degree-credit instruction, and 1961 National Science Foundation data for science teaching. The projections cover the period 1961 to 1970 for the United States and outlying parts.

**Table 1.—Full-time equivalent instructional staff for resident degree-credit courses: United States and outlying parts, 1953–54 to 1970–71** [1]

[In thousands]

| Academic Year | Total full-time equivalent | Instructor or above | | | Full-time equivalent of unranked instructional staff |
|---|---|---|---|---|---|
| | | Total full-time equivalent | Full-time | Full-time equivalent of part-time | |
| **Actual** | | | | | |
| Fall: | | | | | |
| 1953–54 | 148.3 | 140.3 | (2) | (2) | [3] 8 |
| 1955–56 | 161.2 | 151.3 | (2) | (2) | [3] 10 |
| First term: | | | | | |
| 1957–58 | 188.6 | 177.6 | 154.6 | 22.9 | [3] 11 |
| 1959–60 | 201.2 | 189.2 | 163.7 | 25.6 | [3] 12 |
| **Estimated** | | | | | |
| 1960–61 | 212 | 199 | 172 | 27 | 13 |
| 1961–62 | 226 | 212 | 183 | 29 | 14 |
| **Projected** [4] | | | | | |
| 1962–63 | 238 | 224 | 194 | 30 | 14 |
| 1963–64 | 246 | 231 | 200 | 31 | 15 |
| 1964–65 | 264 | 243 | 215 | 33 | 16 |
| 1965–66 | 284 | 267 | 231 | 36 | 17 |
| 1969–70 | 343 | 322 | 278 | 44 | 21 |
| 1970–71 | 357 | 335 | 290 | 45 | 22 |

[1] Source of actual data: *Biennial Survey of Education in the United States*, Chapter 4, Section 1, *Statistics of Higher Education: Faculty, Students and Degrees, 1949–50, 1951–52, and 1953–54* by Henry G. Badger; *Faculty in Institutions of Higher Education, November 1955* (Circular No. 504), by M. Clemens Johnson and Leah W. Ramsey; *Faculty and Other Professional Staff in Institutions of Higher Education, First Term 1957–58* (Circular No. 596), by Wayne E. Tolliver and Hazel C. Poole. U.S. Department of Health, Education, and Welfare, Office of Education. Washington: U.S. Government Printing Office, 1952, 1955, 1956, 1957, and 1959. Data for 1959–60 from *Summary Report, Faculty and Other Professional Staff in Institutions of Higher Education, 1959–60* (OE–53014) by Felix H. I. Lindsay, issued December 1961 by the Office of Education. Estimates for 1960–61 and 1961–62 are based on unpublished Office of Education fall, 1961, data on instructional staff in universities, table 2, footnote 1.

[2] Data not available.

[3] Full-time equivalent unranked staff as a percent of total unranked staff is estimated to be the same (31.8 percent) as for part-time instructors and above.

[4] The projection of full-time equivalent of part-time instructors and above is based on the assumption that full-time equivalent as a percent of part-time staff will remain at the 1957–59 level of 31.8 percent, and that this same percent will apply to the number of unranked instructional staff. This percent (31.8) was multiplied by the number of part-time and unranked instructional staff shown in table 2.

Summary highlights from the report include the following:

● In the 1957–61 period, the full-time equivalent instructional staff for teaching all resident degree-credit courses increased at the average rate of about 10,000 per year. Future growth is expected to be higher (See table 1). Average annual growth during the 1962–71 decade will be more than 14,000.

● The total number of persons teaching resident degree-credit courses during the 1957–61 period increased almost 14,000 per year (See table 2). The total instructional staff will probably increase about 21,000 per year during the 1962–71 decade. The increase in teaching staff with the rank of instructor or above will be almost 12,000 per year for full-time and 6,000 per year for part-time staff. The unranked instructional staff, the majority of whom are estimated to be part-time, will increase almost 3,000 per year.

**Table 2.—Total instructional staff for resident instruction in degree-credit courses: United States and outlying parts, 1949–50 to 1970–71** [1]

[In thousands]

| Academic Year | Total | Instructor or above | | | Junior instructional staff |
|---|---|---|---|---|---|
| | | Total | Full-time | Part-time | |
| **Actual** | | | | | |
| 1949–50 | 191.4 | (2) | (2) | (2) | (2) |
| 1951–52 | 184.8 | (2) | (2) | (2) | (2) |
| 1953–54 (Fall) | 208.5 | 182.0 | (2) | (2) | 26.5 |
| 1955–56 (Fall) | 227.9 | 197.8 | (2) | (2) | 30.1 |
| 1957–58 (1st Term) | 260.5 | 226.5 | 154,602 | 71.9 | 33.9 |
| 1959–60 (1st Term) | 283.1 | 244.5 | 163,656 | 80.8 | 38.6 |
| **Estimated** 1st Term | | | | | |
| 1960–61 | 296 | 256 | 172 | 84 | 40 |
| 1961–62 | 312 | 269 | 183 | 86 | 43 |
| **Projected** [3] 1st Term | | | | | |
| 1962–63 | 334 | 289 | 194 | 95 | 45 |
| 1963–64 | 345 | 298 | 200 | 98 | 47 |
| 1964–65 | 370 | 320 | 215 | 105 | 50 |
| 1965–66 | 398 | 344 | 231 | 113 | 54 |
| 1969–70 | 480 | 415 | 278 | 137 | 65 |
| 1970–71 | 501 | 433 | 290 | 143 | 68 |

[1] Source of actual data: Badger; Johnson and Ramsey; Tolliver and Poole; and Lindsay, op. cit.

[2] Data not available.

[3] The projection of total instructional staff is based on the assumption that total degree-credit enrollment will increase to 7 million by fall 1970 and that the student-staff ratio will increase from 12 to 1 in 1959–60 to 14 to 1 by 1969–70. It is assumed that the proportional distribution of instructional staff by rank and full- and part-time status will remain constant at the 1959–60 level.

● The enrollment increases required to fill national needs for persons prepared in the natural sciences during the next decade are likely to result in a demand for larger percentage increases in instructional staff for science courses than for fields other than the natural sciences.

● The instructional staff for the life sciences is expected to be 41 percent higher in 1965–66 and 59 percent higher in 1970–71 than it was in 1960–61, and the staff for engineering, mathematics, and physical sciences is expected to be 44 percent higher in 1965–66 and 89 percent higher in 1970–71 than the 1960–61 staff. (For fields other than science, the staff is expected to increase at a slower rate: 31 percent higher in 1965–66 and 65 percent higher in 1970–71 than it was in 1960–61.)

● The full-time equivalent instructional staff for resident degree-credit courses in the life sciences is expected to increase at an annual rate of about 1,300 in the next 10 years, with larger increases occurring in the first half of the decade.

● Increases in instructional staff for engineering, mathematics, and physical sciences will probably average 3,200 per year over the next 10 years.

More tables and detailed analyses will appear in the publication, to be entitled *Instructional Staff in Institutions of Higher Education 1950–1970* (OE–53018). When the publication is available, an announcement will appear in *Higher Education*.

## International Education

### U.S. Aids Education in Peru

TEACHERS COLLEGE of Columbia University, New York, has been awarded a $1,187,500 contract by the Agency for International Development to work with Peru's Ministry of Education in all phases of an

educational reform and development program. The program seeks changes in school course content to prepare Peruvians for a shift from an agricultural to an industrial society, together with necessary expansion of facilities to make education available to a greater portion of the population.

The Peruvian Government is expected to raise additional funds for school construction and equipment as well as examine the organization and functions of the educational structure. The program will examine educational content at all levels—teacher education; technical training, including both vocational agriculture and industry; and primary school.

Columbia University will provide 10 or 12 advisers from various administrative and program fields and educational specialities to work with the Peruvian educators in all facets of the education program.

### Institute Extends Program

FOR THE FIRST TIME this summer, the Institute of International Education (IIE) will include nonsponsored foreign students in its summer orientation and English language training programs for foreign students studying in the United States. (Nonsponsored students are those who are not receiving U.S. Government aid, and are no more than partially assisted by any organization, foundation, or other agency. They may, however, be the recipients of scholarships from a college or university, and still be eligible for the summer programs.)

The Department of State has awarded a grant of $125,000 to support the programs. The grant will provide for 50 full scholarships to any of 3 eight-week language training programs sponsored by IIE and held at the University of Arizona, the University of Kansas, and Bucknell University. It will also provide approximately 165 tuition waivers for campus-sponsored orientation programs, ranging from 2- to 6-weeks, and conducted by Boston University, University of Rochester, Lewis and Clark College, Southern Illinois University and Southern Methodist University. In addition, arrangements will be made by the Experiment in International Living for approximately 400 foreign students to stay for 1 month in the homes of American families.

Students selected for scholarship assistance to the summer sessions will include both graduates and undergraduates. Selection, however, will be limited to foreign students from the Far East, Latin America, Africa, and the Near East.

In addition to the language and orientation programs, a special summer Economics Institute for Foreign Graduate Students is also open to nonsponsored students. The program is administered by the Institute and has been underwritten by the Ford Foundation since 1958. It will provide newly arrived students of economics and agricultural economics with concentrated training in basic economic analysis and supplementary training in oral and written English. It will be held at the University of Colorado, Boulder.

### University to Train Latin American Teachers

THE UNIVERSITY OF AKRON, through a $50,000 grant renewal from the Agency for International Development, will conduct an inservice educational program for Latin American school teachers for the third consecutive year.

The university's College of Education arranges classroom sessions and field experiences for the teachers who this year come from the Dominican Republic, Colombia, Honduras, and Nicaragua. Two other U.S. universities—Geneseo State College (N.Y.) and the Pennsylvania State University—conduct similar inservice training programs under contract with AID.

### OEF Leadership Institute

THE OVERSEAS Education Fund (OEF) of the League of Women Voters has announced a leadership institute for 10 Latin American and 4 U.S. women to begin in September 1963 at Wellesley College, Wellesley.

The 8-month program supported by grants from the Rockefeller Foundation and the Agency for International Development, will train qualified women to work professionally with the increasing number of voluntary organizations in their own countries.

Participants will study the major political, economic and social trends in modern society; the social and political organization of modern nations; and the role of the citizen in a free society.

Following their 8 months at Wellesley, the Latin American participants will serve a year's apprenticeship in their own countries. They will work with

voluntary organizations under the guidance of the Fund's Latin American consultants.

Candidates were nominated by individuals or voluntary organizations.

### Russians to Study English at Cornell

"English for Soviet Teachers" is a program being undertaken this summer at Cornell University to improve the English proficiency of Russian teachers who teach English in Soviet schools or who use it in the classroom. It is part of an exchange program which will also send American teachers to study in the Soviet Union.

The Cornell program is one part of a two part program under the Inter-University Commission on Travel Grants, the administrative agency which handles academic exchanges under the general agreement on cultural exchange between the U.S.S.R. and the U.S., a continuation of the original Lacey-Zarubin agreement of 1958. Pennsylvania State University is conducting the second part of the program by sending American teachers to Russia to study.

### Report Shows Increase in Exchange Programs

As a result of the expansion and growth of educational and cultural exchange programs, disbursed funds for fiscal year 1962 increased by more than 20 percent over the previous fiscal year, according to the annual report of the Institute of International Education.

The Institute opened 3 oversea offices during 1962: in Lima, Peru; Nairobi, Kenya; and Bangkok, Thailand. The Institute administers the State Department's Fulbright program in which approximately 850 graduate students were recommended for awards in 42 foreign countries for 1961–62. The Institute also administers exchanges of specialists (artists, scholars, educators, government and professional leaders) and serves as an information clearing house on international education.

### Latin American Farm Leaders Train in United States

Seventy-five young farm leaders from four Latin American countries are in the United States to learn how to create and manage agricultural institutions in their own countries. The Latin Americans, who come from Venezuela, Chile, Bolivia, and Peru, will live for 4 months with farm families in North and South Dakota, Montana, Minnesota, Colorado, Iowa, and Wisconsin. They will study many aspects of farming, including marketing and supply cooperatives, farm organizations, governmental agencies for farm credit, and social and civic organizations.

From September 15 to October 4 the Trainees will evaluate their studies at the University of Wisconsin under the auspices of its Agricultural Extension Division. They will meet in Washington October 6–8 for a summation program before their departure home.

The program, which is being conducted by the National Farmers Union under a contract with the Agency for International Development, is a pilot project, planned for 2 years. It may later be extended to other regions. The annual cost is $160,000.

### Guidebook for Community Action

The United States National Commission for UNESCO has recently published a guidebook on human rights action. The pamphlet grew out of a meeting held in the fall of 1962 and attended by representatives of national organizations concerned with human rights.

Entitled *The Great Question—Human Rights: A Guide for Community Action*, the pamphlet is available for 50 cents from various community organizations including the American Association for the United Nations, Inc., 345 East 46 Street, New York 17, N.Y.

### OAS Graduate Fellowship Program

Under the program of graduate fellowships administered by the Organization of American States (OAS), 49 Latin American and 11 U.S. institutions for graduate study or advanced research and development make available their facilities, and often financial assistance, to students holding OAS fellowships.

Study is offered in the following programs: Agriculture, in 5 Latin American institutions; economics, in 5 Latin American, 2 U.S. institutions; engineering and architecture, in 4 Latin American,

1 U.S. institution; general studies, in 5 U.S. institutions; humanities, in 7 Latin American, 1 U.S. institution; medicine, in 25 Latin American institutions; natural sciences, in 8 Latin American, 1 U.S. institution; public administration, in 2 Latin American, 2 U.S. institutions; and social sciences, in 7 Latin American, 1 U.S. institution.

Dr. Javier Malagon is director of the OAS fellowship program.

## The Effectiveness of the Educational and Cultural Exchange Program of the U.S. Department of State

Excerpts from the Report to the Congress

On March 29, 1963, the U.S. Advisory Commission on International Educational and Cultural Affairs submitted a report to the Congress on its study of the effectiveness of past educational and cultural exchange programs planned and administered by the Bureau of Educational and Cultural Affairs of the Department of State and carried out overseas under the general supervision of the U.S. Information Agency.

The Commission, which was created by the Fulbright-Hays Act of Sept. 21, 1961, was appointed in May 1962. John W. Gardner, president of the Carnegie Corporation of New York, is the general chairman. Other members include: Walter Adams, professor of economics, Michigan State University; James R. Fleming, publisher, Fort Wayne *Journal-Gazette;* Luther H. Foster, president, Tuskegee Institute; Reverend Theodore M. Hesburgh, president, University of Notre Dame; Walter Johnson, professor of history, University of Chicago; Franklin D. Murphy, chancellor, University of California at Los Angeles; Mabel M. Smythe, principal, New Lincoln High School, New York, New York; Roy E. Larsen, *Vice Chairman*, Chairman, Executive Committee, *Time, Incorporated.*

The Congress had specified that emphasis be put "on the activities of a reasonably representative cross section of past recipients of aid," that is, upon the activities of the people who had visited the United States on Department of State grants since the beginning of the Department's educational and cultural exchange program. The focus of the report is on the foreign grantee. American grantees were included only with reference to professors and lecturers.

The Commission's findings were based on 1) detailed studies of former grantees and of prominent local leaders in 20 countries; 2) a full inquiry of U.S. embassies in selected countries; 3) visits by Commission members to Europe, Latin America, and Africa; 4) interviews with private individuals, prominent in the field of education and cultural exchange; 5) interviews with high level officials in Washington; 6) consultations with the National Association of Foreign Student Advisors; 7) interviews with the principal officers immediately concerned with the educational and cultural affairs program in the Department of State; 8) a review of the research done over the past decade on the operation and effectiveness of the exchange program; and 9) studies and comparisons of the experiences of Commission members in the field of educational and cultural interchange.

The following are highlights taken from the summary of the Commission's report:

- Testimony from all sources is overwhelming that the program as a whole is effective. The evidence is also conclusive that the program has proved itself an essential and valuable part of America's total international effort.
- There is impressive testimony that the exchange program increases mutual understanding.
- Evidence is abundant that the exchange program has succeeded in helping dispel among foreign visitors many misconceptions and ugly stereotypes about the American people.
- The exchange program does not bring about a uniformly favorable point of view on all aspects of the American scene; the reaction of former grantees varies considerably with the country from which they have come and with the particular aspect inquired about.
- The program has been outstandingly successful in providing a valuable educational experience to foreign grantees.
- The evidence is significant, though somewhat less than conclusive, that the grantee's U.S. visit has also benefited his home country.
- The program has effectively established channels of communication between the people in other countries and the United States.
- The exchange program has effectively supported one of the Nation's most basic international objectives—of helping support strong free societies able to work together, in mutual trust and understanding, on the grave issues of our time.

## PEACE CORPS AROUND THE WORLD

**As of May 31, 1963, a total of 4,439 volunteers were serving in the Peace Corps in 45 countries (for additional information on the Peace Corps, see *Higher Education*, June 1963):**

| Country | Number of volunteers |
|---|---|
| Afghanistan | 9 |
| Bolivia | 112 |
| Brazil | 132 |
| British Honduras | 31 |
| Cameroon | 34 |
| Ceylon | 36 |
| Chile | 99 |
| Colombia | 255 |
| Costa Rica | 26 |
| Cyprus | 23 |
| Dominican Republic | 144 |
| Ecuador | 156 |
| El Salvador | 21 |
| Ethiopia | 278 |
| Gabon | 41 |
| Ghana | 129 |
| Guatemala | 27 |
| Honduras | 27 |
| India | 74 |
| Indonesia | 17 |
| Iran | 41 |
| Ivory Coast | 51 |
| Jamaica | 32 |
| Liberia | 129 |
| Malaya | 169 |
| Morocco | 56 |
| Nepal | 67 |
| Niger | 16 |
| Nigeria | 295 |
| North Borneo/Sarawak | 92 |
| Nyasaland | 42 |
| Pakistan | 146 |
| Panama | 19 |
| Peru | 197 |
| Philippines | 621 |
| St. Lucia | 14 |
| Senegal | 33 |
| Sierra Leone | 120 |
| Somalia | 39 |
| Tanganyika | 59 |
| Thailand | 225 |
| Togo | 45 |
| Tunisia | 94 |
| Turkey | 39 |
| Venezuela | 84 |

**An additional 385 were in training to serve in 17 countries:**

| Country | Number of volunteers |
|---|---|
| Afghanistan | 36 |
| Brazil | 76 |
| Colombia | 64 |
| Gabon | 48 |
| India | 42 |
| Malaya | 1 |
| Pakistan | 36 |
| Panama | 15 |
| Peru | 110 |
| Thailand | 4 |
| Tunisia | 1 |

The Commission made the following recommendations and suggestions for improvement:

- That the exchange program make a concerted effort to seek out and select more "have-nots" with particular promise and talent, so that, in keeping with this country's traditions, an American exchange experience never becomes a privilege restricted to the elite.
- That the exchange program make a particular effort to seek out and select those candidates abroad who are sufficiently vigorous and restless to help promote desirable social and economic change.
- That more "field selection centers" be set up on a regional basis overseas, under private sponsorship, to assist U.S. universities and private agencies in choosing properly qualified students.
- That a special study be made of the private contract agencies to determine what their present effectiveness is and how they might more fully adapt themselves to the enormous growth in exchange in recent years; and that all programs for all foreign visitors provide more time and arrangements for meeting a wide cross-section of American families.
- That a substantial increase be made in the very low salaries now offered to U.S. professors and lecturers, even if this means sharply reducing the number of grantees, as well as an allowance for travel for the grantees' dependents; and that

increased use be made of direct recruitment of qualified candidates.

- That a special study be made of the cultural affairs officer, and the bearing that the administration of the educational and cultural program abroad by USIA may have on his work and career.
- That a special study be made of the problems created for the program and the limitations placed upon it by the heavy reliance on foreign currencies.
- That better coordination among the various governmental agencies involved in exchange of persons continue to be the highest priority objective for improvement of the program.
- That the character of the exchange program in any given country must be determined by the needs and character of that country.
- That in the developing countries, the exchange program should, where possible and in keeping with the character of the program, directly concern itself with the strengthening of their educational and social institutions.
- That the new enthusiasm for work with developing nations should not lead to neglect or downgrading of the educational and cultural programs with Europe.
- That coordination of the approach and procedures of the various government agencies vis-a-vis the universities is urgently needed on the problems of educational exchange and development.
- That "cost of education" grants be paid to universities which receive foreign students for all government-sponsored foreign students.

### In the Office of Education

A CONFERENCE on technical assistance training programs in education was held in the Office April 17–19, 1963. Representatives from 18 institutions located in Michigan, Florida, Wisconsin, North Carolina, Tennessee, Pennsylvania, Georgia, Ohio, Utah, Illinois, Indiana, and the District of Columbia attended the conference.

Oliver J. Caldwell, Acting Associate Commissioner for International Education, Office of Education, and Robert I. Biren, Acting Director, Office of Program Support, Agency for International Development, addressed the conference.

Topics discussed included "How Training Projects Are Developed Overseas," "English and Orientation," "Academic Problems," and "Research and Resources in Comparative Education."

## OE program notes

### National Defense Education Act

### 55 Language and Area Centers To Be Supported by Title VI in 1963–64

The Office of Education will allocate $2,309,287 to 34 colleges and universities for the support of 55 Language and Area Centers during academic year 1963–64. Of these, two are newly designated centers receiving Federal support for the first time this year (see *Higher Education*, April 1963, p. 14). Of the remaining 53 centers, 19 have been in the program since its beginning in 1959–60, 27 first participated in 1960–61, 6 more were added in 1961–62, and one in 1962–63.

The purpose of the centers, authorized by Title VI (Language Development) of the National Defense Education Act, is to expand and strengthen instruction on a broad national basis in critically needed modern foreign languages and related studies.

Funds allocated by the Office of Education for the centers are used mainly for instructional costs. Sponsoring colleges and universities must contribute at least half the cost of center operations.

Instruction in approximately 60 languages will receive NDEA support at these centers during the coming academic year. The greater proportion of these funds will support the seven major critical languages and related studies: Arabic, Chinese, Hindi-Urdu, Japanese, Portuguese, Russian, and Spanish.

The 55 centers are divided by world area as follows: Far Eastern, 11; Slavic and East European, 10; Middle Eastern, 8; Latin American, 7; South Asian, 7; African, 5; Southeast Asian, 3; Soviet-Far Eastern, 2; and Uralic-Altaic, 2.

A complete list of the centers and the languages to be supported in 1963-64 may be obtained on request from the Office of Education.

### Report on Higher Education in the U.S.

*Higher Education in the United States*, by Harold A. Haswell, has recently been published by UNESCO as No. 47 in a series of Education Studies and

Documents. In addition to describing all higher education opportunities in the United States, Dr. Haswell presents a summary analysis of the changing requirements of higher education in our country and the steps being taken to meet these requirements.

*Higher Education in the USSR* was the first of a number of national studies in the educational series devoted to the topic. It is believed that publication of such studies will assist educational authorities in arriving at answers to some of the more perplexing questions on higher education in their respective countries and assist developing countries in the establishment of national university systems.

These studies are to be brought together in the fourth volume of the *UNESCO World Survey of Education* to be published in 1964, which will provide worldwide coverage of existing higher education institutions, with a general comment by the Secretariat on current trends and developments in the field.

## Summer Sessions Survey

A BRIEF history of summer sessions and a report of the 1960 survey of summer sessions of colleges and universities, conducted by the Office of Education, will be released in September. The report shows recent trends and gives information of nationwide and regional scope based upon the policies and procedures of the 1960 summer sessions. The report includes data gathered from 1,369 institutions of higher education on the following items: Purposes, facilities, financing, faculties, chief administrative officers, student enrollments, and present and future program offerings. Data are tabulated mainly by geographic region and by type of institution.

As enrollments in institutions of higher education increase, the number of summer sessions will increase rapidly. Many college and university administrators are evaluating the expanded summer session as a possible means for immediate and efficient accommodation. Because this is the first nationwide comprehensive study of summer sessions, it should be of value to persons interested in the expansion and improvement of opportunities for higher education.

Three preliminary reports of the survey of summer sessions in 1960 have already been published: *Travel Programs Sponsored by Institutions of Higher Education in Summer Sessions, 1960* (OE–54028), *Regular-Year Scholarship Programs of Institutions of Higher Education Applicable for Summer Session Study, 1960* (OE–55033), and *Summer Session Offerings in Institutions of Higher Education: 1960, A Directory* (OE–56009).

The present report, *Summer Sessions in Colleges and Universities of the United States: History and a Report of 1960 Survey* (OE–56012), is by Donald F. Warner, Bernice R. Retzlaff, and Harold A. Haswell.

## Project English

Sixteen Project English proposals were recommended for approval at the April 1963 meeting of the Research Advisory Council. The title of the projects, the principal investigators, and the institutions at which the investigation will take place are shown in the box overleaf.

## Cooperative Research

THE COOPERATIVE RESEARCH PROGRAM has recently revised its procedures and expanded its scope to include several new programs in fiscal year 1964. The six areas to which proposals may be submitted will be: (1) The basic and applied research program, (2) the curriculum improvement program, (3) the developmental activities program, (4) the demonstration program, (5) the small contract program, and (6) the research and development center program.

### 1. Basic and Applied Research Program

Historically, basic and applied research studies have formed the major proportion of all those projects supported by the program. These projects have included, among others, controlled experimental research, surveys, correlational, methodological and case studies, and developmental and historical studies on a wide variety of topics related to education. These have included such subjects as mental retardation, aptitudes and abilities, cultural deprivation, the roles of teachers and school administrators, programed instruction, guidance and counseling, and school finance. The only changes in this program are deadlines for the submission of proposals which become September 1, December 1,

**Project English—Proposals Recommended**

The sixteen Project English proposals approved by the advisory committee in April were these (see page 29);

| *Title* | *Investigator and institution* |
|---|---|
| An Electromyographic Appraisal of Vocalism in Silent Reading | Donald L. Cleland, University of Pittsburgh. |
| A Study of Integrated Academic and Professional Experiences in Language and Writing for the Preparation of Secondary School Teachers of English. | Elizabeth H. Rusk, Michigan State University. |
| Construction and Application of Paradigms for Concept Formation in Writing | D. Gordon Bohman, Michigan State University. |
| A Pilot Study Concerned With the Integration of Bibliographies and the Storage and Retrieval of Bibliographical Data in the Area of English Studies. | Charles Nilon, University of Colorado. |
| Longitudinal Study Through the Fourth Grade of Language Skills of Children With Varying Speech Sound Articulation in Kindergarten. | Mildred C. Templin, University of Minnesota. |
| The Close Procedure as a Tool for Analysis of Verbal Learning and Retention | Richard H. Bloomer, University of Conn. |
| A Speech and Reading Enrichment Program—A Request for a Pilot Study Under Curriculum and Methods. | Milton A. Valentine and Rita S. Seiss, University of Colorado. |
| The New York University Center for the Demonstration of Linguistics Programs at the Junior and Senior High School Levels. | Neil M. Postman, New York University. |
| A Proposal for a Demonstration Center in English | Mark Schorer, University of California. |
| Developing Competency in Written Composition in Children from Kindergarten through Elementary School by Means of Curricular Materials Based Upon Relationships Between Concept Attainment and Language Proficiency. | J. W. R. Lindemann, University of Georgia. |
| Teaching English as a Second Language | Gerald Dykstra, Columbia University. |
| Relationships of Selected Language Variables to Comprehension Difficulty and to Levels of Comprehension Ability of Subjects. | John R. Bormuth, University of Calif. |
| Linguistic Acculturation of the Culturally Deprived | Raven I. McDavid, University of Chicago. |
| A "Correspondence Tutorial" Method for Teaching Freshman English Compared With a Classroom System of Presentation Employing a Variant on the Team-Teaching Approach. | John R. Willingham, University of Kansas. |
| Effectiveness of Dictating Machines Used by Teachers To Make Comments for Improving the Written Composition of College Students. | T. J. Kallsen, Stephen F. Austin State College. |
| The Effectiveness of College-Level Instruction in Freshman Composition | Ross M. Jenell, State College of Iowa. |

and March 1. Notification of action will be approximately 3 months after each deadline.

## 2. Curriculum Improvement Program

The Cooperative Research Program provides support for curriculum improvement projects that are significant to education at one or more grade levels. These projects may deal with a curriculum, a program, a course, a subject, or any aspect of these. In the past, curriculum projects have been restricted to English and the social studies; however, the new curriculum improvement program will consider proposals in any content area of education. The projects should be designed to achieve one or more of the following purposes:

1. To clarify or redefine the nature and aims of a content area.
2. To develop sequential patterns in a content area based on factors of human growth and development and on the teaching-learning process.
3. To develop instructional materials and methods that will achieve general or specific aims within a content area.
4. To evaluate the effectiveness of the materials and methods that have been developed.
5. To disseminate promising materials and methods to those interested throughout the country.

## 3. Developmental Activities Program

Developmental activities of the Cooperative Research Program aim at stimulating new research and development and at opening up problems for further exploration. The general purposes are (1) to increase the quantity of high quality research and development projects in particular areas of education, (2) to promote large-scale, collaborative attacks on unusually pressing problems, and (3) to increase the competence of persons engaged in educational research.

The following are examples of the wide variety of activities which are eligible for support under the developmental program:

1. Analytical and integrative reviews of research literature.
2. Conferences on planning, dissemination, and research design.
3. Development of experimental devices and materials.
4. Development of new evaluative instruments and techniques.
5. Development of taxonomies, models, and theories.

Other activities which are designed to stimulate further research and development in education would also be appropriate. Participation in these activities is by invitation only. A proposal submitted without an invitation will not be accepted. However, if individuals or groups have ideas for developmental activities, they may get in touch with a member of the Cooperative Research staff.

## 4. Demonstration Program

The existing program for demonstrations will be considerably broadened and expanded in fiscal year 1964. The major purpose of this program is to disseminate, through demonstrations, applications of new educational techniques and materials which have been developed by educational research. More specifically, the purposes of the demonstration program are to:

1. Make technical applications of newer educational techniques and to identify the more promising ones.
2. To test in a natural educational setting the feasibility of particular practices developed in laboratory situations.
3. To display new advances in educational technology for the educational community.

## 5. Small Contract Program

The small contract program is designed to support small-scale research on educational problems. A special feature of this program is the review process which is tailored to proposals for small projects and makes funds available in a relatively short time—typically two months or less. The three examples below are illustrative of the wide range of projects that are eligible for support:

1. Experimental research, surveys, and field studies.
2. Pilot or exploratory studies designed to obtain a clear indication of the probable feasibility and potential value of a more extensive research effort on the same or a similar problem.
3. Analysis of existing data to which access has been assured.

There are several limitations to a request submitted under the small contract program. The funds requested may not exceed $7,500 and the duration is restricted to 18 months or less. A research project which is to be submitted by an undergraduate or graduate student must be cosponsored by a professional employee of a college, university or State education department who will assume responsibility for the research being completed according to the terms of the contract.

## 6. Research and Development Centers

Research and Development Centers are to be established this year as part of the Cooperative Research Program. These centers will be affiliations of colleges, State departments of education, and local school systems, based at universities in which researchers, administrators, and teachers can work toward the improvement of educational processes. Centers will conduct basic research, translate research findings into educational procedures which will then be evaluated, and disseminate information about both the research and the procedures. The centers may focus on any major area of significance for education. Their major purposes are these:

1. Development and application of new theory and knowledge about the educational process through research.

2. Development of new educational procedures based on research findings and the evaluation of these procedures in practical situations.

3. Dissemination of research findings and information on new educational procedures through activities, live demonstrations, films, publications, and other forms of communication.

There are no specific limits on the duration of such projects nor on the Federal funds which may be allocated to a research and development center. Applications may be submitted by any college, university, or State education department.

## Review Procedures

Review procedures will vary somewhat from program to program. Criteria for evaluating proposals in the various programs will be patterned after those used in the basic and applied research program with appropriate modifications to meet the particular program. The criteria are grouped in the following areas:

1. Significance of the proposed project for education.

2. Soundness of the research design or operational plan.

3. Personnel and facilities available to carry out the proposed project.

4. Economic efficiency of the proposed project.

Deadlines for the six programs are shown in the following list:

| *Deadline dates* | *Program* | *Notification of action* |
|---|---|---|
| Sept. 1 | Basic and applied research. | 3 months after deadline. |
| Dec. 1 | Curriculum improvement. | |
| Mar. 1. | Demonstration. | |
| None | Small contract. Developmental activities. | 2 months after receipt of proposal. |
| Sept. 1<br>Dec. 1,<br>Mar. 1. | Research development centers. | 3–6 months after receipt of proposal. |

### Emphasis on Teacher Education

THE Cooperative Research Program of the U.S. Office of Education expects to have substantial funds to support basic and applied research and curriculum study in teacher education during the fiscal year which begins July 1, 1963.

This emphasis is intended to provide a special coordinated program to advance teacher education through research, curriculum development, and pilot or demonstration programs. The program will be similar to programs now being carried out under Project English, Project Social Studies, and the Talent Development Project of the Office of Education.

Institutions of higher education and State departments of education are encouraged to submit proposals for basic and applied research and for curriculum study in teacher education to meet the September 1, 1963, deadline for Cooperative Research proposals. New suggested outlines for submitting the various kinds of proposals are being prepared by the Cooperative Research Branch and may be secured upon request.

# Other Program Notes

### Public Health Service

#### Research contracts

During the first quarter of 1963 the National Institutes of Health entered into 34 new research contracts totaling $1,648,729 with 31 organizations, including university medical schools, pharmaceutical laboratories, and similar research institutions in 15 States and the District of Columbia.

Supplementary agreements involving $5,889,642 were also executed during the same period on another 60 contracts already in effect in 18 States and the District of Columbia.

#### Grants and fellowships

The Public Health Service awarded 13,727 research grants and 3,545 fellowships totaling $356,974,140 during the first 10 months of fiscal year 1963. The awards included funds for new research grants, fellowships, and research career awards as well as renewals of those previously approved.

#### NIH supports doctoral education program

The University of Texas, supported by a $30,000 grant from the National Institutes of Health, has opened a new doctoral education program in school psychology. The grant provides for 4 scholarships

for graduate students in the second or third year of their doctoral work. The grant will be renewed annually for 3 years.

### Grant for mental health

The National Institute of Mental Health, National Institutes of Health, has awarded a 2-year, $110,000 grant to the National Institute of Labor Education (NILE) to foster the development of mental health activities within labor organizations.

NILE is a non-profit organization of universities and unions whose purpose is to sponsor programs of labor education. For the past 3 years, it has been conducting a study of the special mental health problems of working people. The new grant will aid this study.

Participating universities include Rutgers: The State University (N.J.); Wayne State University (Mich.); University of California at Berkeley; and Roosevelt University (Ill.). More than 20 union groups are also actively involved in the study.

### Radiation health specialists grants

GRANTS totaling $1,191,661 have been awarded to 22 universities for training graduate students to become radiation health specialists under a program sponsored by the Public Health Service. The training program in this highly specialized field of public health is designed to meet an important national need for professional manpower to assess and control radiation hazards resulting from nuclear industry, X-rays, radium, and other sources, including fallout, according to Surgeon General Luther L. Terry.

### Research grants index available

Current medical research projects supported by the Public Health Service in 1,552 American and foreign research institutions at a cost of nearly $400 million are listed and described in the second annual *Research Grants Index* recently published by the PHS. The 1,450-page volume, compiled by the National Institutes of Health, represents more than one-third of the Nation's fiscal year 1962 expenditure for medical and health-related research.

Designed to accelerate communication of research knowledge among scientists and administrators of scientific programs, the Index will be supplemented by a thesaurus of 12,300 biomedical terms used in the indexing.

The publication, PHS Publication No. 925, 1962 edition, is available from the Superintendent of Documents, Government Printing Office, Washington 20402, D.C. for $7.00.

## Atomic Energy Commission

### "Atoms at Work" exhibit in Vienna

The Atomic Energy Commission's newly designed nuclear exhibit, part of the AEC's "Atoms at Work" presentations, opened on May 21 for a 4-week showing in Vienna, Austria. The "Atoms at Work" presentations have attracted more than 5 million visitors in Europe, Asia, Africa, and Latin America since the first exhibit in 1955.

During the 4 weeks, scientists and engineers conducted experiments, gave special seminars on nuclear science and technology for young Austrian scientists, and conducted lectures and classes for high school science students.

### More grants to colleges and universities

The Atomic Energy Commission has approved 85 educational assistance grants totaling $825,525 to 84 colleges and universities. The grants will provide for purchase of laboratory equipment and fabrication of neutron sources for instruction in the nuclear aspects of the engineering, life, and physical sciences. The awards are based upon the recommendations of special review committees made up of college university faculty members active in nuclear science and AEC technical staff members.

The new grants bring to $24.4 million in total assistance provided to 614 educational institutions for laboratory equipment to be used in nuclear education since the program was initiated in 1956.

### Report on engineering education

A report on a 2-year study, conducted by a joint committee of the American Society for Engineering Education and the American Nuclear Society, to delineate the type of education that should be given to nuclear engineers has recently become available.

According to the chairman of the joint committee, Glenn Murphy, the study, sponsored by the Atomic Energy Commission, was planned "to assist universities and technical schools in formulating a philosophy of long-range educational program suitable for those who will be directing the applications of nuclear energy 20 years hence." The major emphasis of the report is placed on graduate education.

Copies of the report may be obtained from the Executive Secretary of the American Society for Engineering Education at the University of Illinois, Urbana, Ill., for 25 cents each.

## National Science Foundation

### Postdoctoral fellowships

Applications for National Science Foundation postdoctoral fellowships will be accepted through Sept. 3, 1963. About 65 awards will be made for postdoctoral study or research in a number of scientific fields.

Requirements for applicants include U.S. citizenship, ability and aptitude in the sciences, and a Ph. D. degree or equivalent research training and experience. Stipends are $5,500 a year plus dependency allowances for married fellows. Fellows may engage in scientific study and/or scientific work at nonprofit American or foreign institutions. A limited travel allowance is also available.

Announcements and application materials may be obtained from the Fellowship Office, National Academy of Sciences-National Research Council, 2101 Constitution Avenue NW., Washington 25, D.C. Applicants will be notified by Oct. 28, 1963.

### Grants for science equipment

Undergraduates in approximately one-third (364) of the Nation's colleges and universities offering baccalaureate degrees in the sciences will receive matching grants from the National Science Foundation for the purchase of modern scientific equipment.

NSF awarded 523 grants, totaling $6,948,500, to the educational institutions which will match funds to purchase scientific instruments, microscopes, small computers, and similar equipment. In choosing proposals for support, the Foundation gave priority to institutions where the desire to improve the content and focus of undergraduate courses was accompanied by detailed and realistic planning.

### Senior postdoctoral and science faculty fellowships

The National Science Foundation is accepting through Oct. 7, 1963, applications for two fellowship programs: senior postdoctoral and science faculty. Awards will be made in a variety of scientific fields.

Requirements for the senior postdoctoral fellowships include U.S. citizenship and a doctoral degree held for at least 5 years or the equivalent education and experience. Approximately 100 Fellows will be selected by NSF.

Requirements for the science faculty fellowships, which are for college teachers of science, mathematics, or engineering, include U.S. citizenship, a baccalaureate degree or its equivalent, and full-time teaching experience at the college level for not less than 3 academic years. The Foundation will select approximately 400 Fellows.

Stipends for successful applicants in both programs will be individually computed on a salary-matching basis, but the maximum support from the Foundation will be limited to $15,000 for a 12-month tenure.

Applications may be obtained from the Fellowships Section, Division of Scientific Personnel and Education, National Science Foundation, Washington 25, D.C. All applicants will be notified by letter on Dec. 9, 1963.

## American Education Week

"Education Strengthens the Nation": has been chosen as the general theme for the 43rd annual observance of American Education Week, November 10–16, 1963. Sponsored by the American Legion, the National Congress of Parents and Teachers, the National Education Association, and the U.S. Office of Education, the week is intended to acquaint the parents and citizens of every community with the achievements, aims, and needs of their schools. In addition to a general theme, each day of the week will have a theme of its own. These will be values for free men, learning opportunities for all, quality teaching, balanced curriculum, community resources, financial support, and goals for the future.

## National Cultural Center

In 1962 the National Cultural Center commissioned a study financed by the U.S. Office of Education and conducted by the Ohio State University Telecommunications Center. Its purpose: To determine the role of television, radio, film, and other media in the Center's program. The study was undertaken in view of the growth in the uses of these media for both educational and entertainment purposes. A report of the study will be contained in a subsequent issue.

## Modern Foreign Languages

*(Continued from p. 8)*

of the exciting contributions it is making. For the sake of clarity the projects are divided into two categories: teaching materials and other kinds of language research. Among the many hundreds of languages which have seldom if ever been taught in our schools, the Research Section has had contracts for the production of teaching materials in about 120, ranging alphabetically from Akan through Quechua to Zyrien. The basic tools a student needs in order to study a foreign language are a systematic introduction to the language, complete with exercises, grammatical analysis, glossary, and editorial notes; a dictionary; graded reading materials, preferably including some analysis and commentary on the foreign culture of which the language is a part; and a separate reference grammar, fully indexed. Extensive sound recordings are also an essential part of this basic package. The magnitude of the work involved is shown by the following figures. On the basis of a survey made by the American Council of Learned Societies in 1958–59, languages were divided for NDEA purposes into three major categories, setting aside those most commonly taught: a group of six which were obviously critical (Arabic, Chinese, Hindu-Urdu, Japanese, Portuguese, and Russian); a list of 18 languages which were judged of immediate but somewhat less importance; and all others. (Clearly this is an ad hoc list based on gross criteria and is subject to reassessment.) For the 18 languages listed by the conference in the second category, a minimum of 72 items would be required to provide the barest list of basic tools required by the student. Of these only 42 are being produced under subsidy by the Research Section *in even one version*. And in language teaching materials as in most things, it is necessary to produce more than one "model" before approaching the best that the present stage of knowledge can support.

The Research Section has also been active in updating teaching materials in the more commonly taught languages (French, German, Italian, Russian, and Spanish). There was no lack of introductory textbooks, of course, but the problem was that they stressed the ability to read and write rather than the more difficult skills of speaking and auditory comprehension. Therefore the Research Section contracted for the preparation of materials in these languages and subsequently, after receiving bids from commercial textbook publishers, licensed one firm to produce and market the materials. Thus for the first time in American education thousands of youngsters in the secondary schools could plan to move for at least 4 years in a straight line toward an active speaking ability in a foreign language by using an integrated series of textbooks. Through this means the Office of Education hoped, of course, to encourage other publishers to enter a field which they had so far thought did not offer a good market. The effort proved successful, and now there is increasing competition between course materials with similar aims in the common languages. It will be long, however, before commercial publishers move in a similar way into the market of the neglected languages.

The other category of work by the Research Section is much broader and more diverse. Basic research into the psychology of language learning is illustrated by a project in which a psychologist is trying to isolate, analyze, and define the primary mechanisms by which we learn to group sounds into systems of speech signals and then to produce these sounds, choosing between them on the basis of the import of the signal and the character of adjacent sounds. X-ray films have been developed in very slow motion to show the physiological processes by which Hungarian, French, Spanish, and English are produced, and the corresponding sound tracks have been electronically "stretched" to fit. In the sphere of audiovisual devices attempts are being made to develop an electronic machine which will show the student on a screen a series of graphic shapes representing certain features (intonation, primarily) of the utterances he is producing. Through such experimentation one may hope that we are moving systematically toward a machine which will be able to evaluate the quality of a student's pronunciation recorded on tape (and eventually perhaps other features of his total speech, such as vocabulary range).

The Research Section has also contracted for various classroom experiments to evaluate different teaching techniques. Some contractors have attempted to measure the effectiveness of audiolingual procedures in teaching reading, or the consequences of diverse approaches to instruction in pronunciation, or the impact of studying a foreign language in the

elementary school on the pupil's performance in other subjects.

But the Research Section has not had sufficient resources to give much attention to foreign languages in the elementary school. Perhaps no part of the Nation's language program is potentially more important than the introduction of competent language teaching into our elementary schools on a massive scale. But the part of wisdom, given the limited funds and skilled personnel available, has been to concentrate on improving the procedures for educating the teachers who must man our language programs at all levels, from the elementary school up to the Ph. D.

When one has started at a very low point, there is a great temptation to overestimate early accomplishments. We may justly feel genuine satisfaction over what has been done to improve our national competence in foreign languages. But that is small by comparison with our needs. Thus it is probably true that, since 1958, our need to communicate with the rest of the world has grown faster than our ability to do so—most especially when we broaden our definition of effective communication beyond the merely mechanical to include an understanding of our interlocutors' habits, values, and desires.

It remains true that few students on entering college can communicate effectively in any language but English, though they have passed the age at which they could have learned a foreign language most easily. It is still true that most students on graduating from college cannot carry their end of a simple conversation in any foreign language. The Fulbright program has extreme difficulty in finding college professors who can teach their specialties in Spanish, French, and German, and rarely attempts to find those who can do so in other languages. When the Government wants to send an employee to do a job overseas, usually he either is expected to use foreign interpreters and translators (frequently prejudiced leaders of the blind) or he must be trained at the expense not only of the training but also of his salary.

We must shun complacency and keep our sense of urgency. Much remains to be done before we can see every sizable elementary school start most of its pupils in a foreign language; before most students of at least average ability in our secondary schools may be expected to reach a basic competence in at least one foreign language; before the average student entering college can take advanced work in his first foreign language, and any elementary language study in college will involve a second or third foreign language; before most school districts with more than four or five thousand students in high school offer at least four years in at least one foreign language which has not customarily been taught—Arabic, Japanese, Swahili, etc. In summary, we have a long way to go before we reach the level where we can find an adequate number of Americans with the ability to communicate face to face with the people of any major nation. Only then will we be able to export a full measure of our good will along with our products and skills.

## NEW PUBLICATIONS

### Government Publications

How To Obtain

(1) *Cost Publications: Send request, enclosing remittance (check or money order), to the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402*

(2) *Free Publications: Request direct from the agency issuing them.*

### From the Office of Education

*Analysis of Research in the Teaching of Mathematics: 1959 and 1960*, by Kenneth E. Brown, John J. Kinsella, Howard Fehr, Sheldon Myers, and Fred Weaver. 1963. 69 p. 30 cents. (OE–29007–60)

*Education in Korea: The 20th Century*. Newsnotes on Education Around the World. April 1963. 8 p. Free. (OE–14–35–8)

*Fall 1962: Enrollment, Teachers, and Schoolhousing in Full-time Public Elementary and Secondary Day Schools*, by Carol Joy Hobson and Samuel Schloss. 1963. 37 p. 20 cents. (OE–14082)

*Language Laboratory Facilities*, by Alfred S. Hayes. New Media for Instruction 4. 1963. 119 p. 50 cents. (OE–21024)

*National Defense Language Institute Program: A Manual for Participating Institutions. NDEA, Title VI.* Revised 1963. 26 p. Free. (OE–27006–63)

*Periodicals Related to International Understanding*, by Lois B. Watt and Thelma M. Knuths. Educational Materials Laboratory Report. Vol. V, No. 2. April 2, 1963. 7 p. Free. (OE–14031–24)

*Role of the School in Prevention of Juvenile Delinquincy*, by William R. Carriker, *ed.* Cooperative Research Monograph No. 10. 1963. 101 p. 35 cents. (OE–25034)

*Summary Report on Bachelor's and Higher Degrees Conferred During the Year 1961–62*, by Wayne E. Tolliver. April 1963. 7 p. Free. (OE–54010–62)

### From Other Government Agencies

*The National Heart Institute's Training Programs.* 1963. 4 p. 10 cents. (PHS Publication No. 1002)

*National Institutes of Health: Scientific Directory 1963 and Annual Bibliography 1962.* March 1963. 182 p. 55 cents. (PHS Publication No. 1014)

*Public Health Service Grants and Awards: Fiscal Year 1962 Funds. Part I: Research Grants.* 1963. 536 p. $1.50. U.S. Government Printing Office (PHS Publication 964, Part I)

*Public Health Service Grants and Awards: Fiscal Year 1962 Funds. Part III: Construction of Cancer Research Facilities, Health Research Facilities, and Hospital and Medical Facilities.* 1963. 56 p. 25 cents. (PHS Publication No. 964, Part III)

*Public Health Service Grants and Awards: Fiscal Year 1962 Funds. Part IV: Health Services, Formula, and Project Grants.* 1962. 53 p. 25 cents. U.S. Government Printing Office (PHS Publication No. 964, Part IV)

*A Report on United States Foreign Operations in Africa*, by Hon. Allen J. Ellender, U.S. Senator from Louisiana. 88th Cong., 1st Sess. Mar. 23, 1963. 803 p. Free. From U.S. Government Printing Office, Document No. 8.

*Resources for Medical Research, Manpower for Medical Research Requirements and Resources 1965–1970.* Report No. 3. January 1963. 72 p. 55 cents. U.S. Government Printing Office (PHS Publication No. 1001)

*Scientific Research and Development in Colleges and Universities—Expenditures and Manpower, 1958.* The National Science Foundation. 1963. 70 cents.

*U.S. Government Grants Under the Fulbright-Hays Act: Program Announcements 1964–65, University Lecturing, Advanced Research; Australia and New Zealand.* March 1963. 17 p. Free. (Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, Washington 25, D.C.)

*United States Government Grants Under the Fulbright–Hays Act: Program Announcements 1964–65, University Lecturing, Advanced Research: Europe, Near East, South and East Asia, Africa.* May 1963. 107 p. Free. Conference Board of Associated Research Councils, Committee on International Exchange of Persons, 2101 Constitution Avenue, Washington 25, D.C.

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